ACUTE LETHALITY DATA FOR ONTARIO'S IRON AND STEEL MANUFACTURING SECTOR EFFLUENTS COVERING THE PERIOD FROM NOVEMBER 1989 TO OCTOBER 1990

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SUMMARY

Under the MISA program, the Iron and Steel Processing Industries were required to monitor their liquid effluents (both final and cooling waters) for acute lethality to trout and to *Daphnia magna* by conducting laboratory toxicity tests. This requirement was based on provisions of the Ontario Environmental Protection Act which allow the Ministry to write regulations requesting persons responsible for sources of contamination to monitor, record and report to the Ministry. Specific details of the toxicity testing requirements may be found in the General Effluent Monitoring Regulation (Ontario Regulation 695/88) and the Effluent Monitoring Regulation for the Iron and Steel Processing Sector (Ontario Regulation 321/89). Data collected under the MISA monitoring regulation will be used, in part, for the development of compliance limits for effluent toxicity. The following data is the company submitted toxicity test results from this monitoring, as well as the results from audit samples that were tested by the Aquatic Toxicity Unit in the Ministry's laboratory in Rexdale. In addition, Atlas Specialty Steel and Dofasco Steel voluntarily submitted toxicity test results for intake water samples, and these have been included in the report. Frequency of sampling was monthly for process effluents and quarterly for cooling waters, with a few exceptions. If tests over three consecutive months showed ≤ 20% mortality to trout, then subsequent trout testing was completed using a single concentration test procedure. In this procedure, fish were exposed to full strength (undiluted) effluent and a control. Companies reverted back to full series test procedures if the effluent sample caused ≥ 20% mortality in any single concentration test.

Acute lethality toxicity tests are a rapid, simple method for measuring the potential effects of complex effluents on aquatic organisms. The monitoring regulations required the companies to conduct all acute lethality tests in accordance with Ministry protocols (Protocol to Determine the Acute Lethality of Liquid Effluents to Fish (Craig *et. al.*, 1983) and *Daphnia magna* Acute Lethality Toxicity Test Protocol (Poirier *et. al.*, 1988)). In these tests, aquatic organisms are exposed to undiluted effluent and several effluent dilutions for a fixed period of time. The Ministry protocols require a 96 hour exposure period for trout and a 48 hour exposure for *Daphnia*. An LC50, the concentration of effluent estimated to cause 50% of the test animals to die, is calculated, where possible, for each sample. This statistic and its associated confidence limits are used as a measure of the toxicity of the effluent. The timing of toxicity sampling was arranged to coincide with chemical characterization of the effluent to assist in the determination of the causes of toxicity.

This report covers the full twelve months of sampling for this sector. Over the twelve months of monitoring, the seven companies in the Iron and Steel industry submitted toxicity results for 248 samples collected from 33 sampling points. An additional 29 audit tests were conducted by the Ministry's laboratory. With one exception, the reporting of toxicity data by this sector went smoothly, and the quality of the data was acceptable. On April 11, 1991 an inspection was conducted on the facility conducting toxicity testing for one of the specialty steel mills. This inspection was conducted in response to several

problems encountered with data received from this company. The inspection revealed several problems at the consulting laboratory, therefore the 12 results submitted for their client have been removed from the database until this situation has been resolved. This data will not be used in any summaries or discussions. In August 1990 there was a labour dispute between the steel workers and Algoma Steel Corporation and Stelco Steel (Hilton and Lake Erie Works), and the operations were shut down for approximately 80 days. Subsequently sampling was disrupted, and no test results were submitted for the months of August, September and October for Algoma Steel, and for the months of September and October for Stelco Steel Hilton Works. Stelco Steel Lake Erie Works was under a Certificate of Approval which required the company to conduct monthly toxicity testing, therefore toxicity sampling was not disrupted.

General

The Iron and steel sector in Ontario can be divided into two groups based on raw materials used, and subsequent differences in production techniques. These two groups are the *integrated mills*, and the *specialty steel/mini mills*. The integrated mills use iron ore, coal and limestone/dolomite, as feed stock and process this material into various finished, or partially refined, iron and steel products. These mills have cokemaking, ironmaking, steelmaking, cold forming, hot forming and finishing operations. The Algoma Steel Corporation, Dofasco Steel, and Stelco Steel Hilton and Lake Erie Works are integrated Steel mills. The specialty steel/mini mills use processed iron products or scrap steel as feed stocks for their steelmaking, hot forming and finishing operations to make specialty steels for the market. Atlas Specialty Steels, IVACO Rolling Mills and Lake Ontario Steel Company Limited (LASCO) are specialty steel or mini-mills. A more thorough overview of Ontario's iron and steel sector can be found in the development document for the effluent monitoring regulation for the Iron and Steel industry (Environment Ontario 1989).

Daphnia magna Toxicity Test Results

Results for 219 *Daphnia magna* toxicity tests conducted on 219 samples of effluent and intake water were submitted by the companies. An additional 29 audit toxicity tests were conducted by the Aquatic Toxicity Unit of Environment Ontario, and these results will be included in the analysis of the data. There is one outstanding request for resubmission of data due to data entry errors. The data base contains 217 test results for the integrated mills and 31 test results for the specialty steel/mini mills.

The overall distribution of toxicity of these effluents to *Daphnia magna* is illustrated in Figure 1. This figure shows the differences in toxicity of mill outfalls to trout and *Daphnia*. For both integrated and specialty steel/ mini mills, there were more samples which were acutely lethal to *Daphnia* than to trout. This difference was greatest for the specialty steel/mini mills where no samples were acutely lethal to trout, but 19.4% of the samples were lethal to *Daphnia*. Two other trends can be identified from Figure 1. The first trend

is that some of the samples from the integrated mills which induce an unusual toxic response with *Daphnia*. Mortalities in these tests were high in the intermediate effluent concentrations (5%, 15% or 30% concentrations) and lower above or below these concentrations. The results for these tests are entered as LC50 > 100%, but they should be examined carefully because they indicate that, to a point, the effluent samples became more toxic as they were diluted. This response was not found in the trout tests, nor was it seen in *Daphnia* tests conducted on samples from the specialty mills, but it has been encountered in effluents from other industrial sectors. The second trend is the greater numbers of samples which have LC50s > 100% for *Daphnia*, than there are for trout regardless of process type.

INTEGRATED MILLS

Approximately 58% of samples tested from the integrated mills were not acutely lethal to *Daphnia magna*, and a further 26.7% had 48h LC50s > 100%. 10% of the samples tested from the integrated mills were acutely lethal to *Daphnia* (48h LC50 ≤ 100%) and toxicity differed between mills (Figure 1).

Algoma Steel Corporation

Algoma Steel Corp. had 11 lethal samples, five of which came from the Bar and Strip Lagoon (Figure 2). There is probably no single cause of toxicity for the Bar and Strip Lagoon samples. In some cases, ammonia levels were approaching lethal levels and, in other cases, cyanide was at toxic concentrations. For example, the sample from May had toxic pH levels of 9.2, cyanide at 280 ug/l, and ammonia at threshold lethal levels. The effluent sample collected from the 24 Inch Coke Quench Overflow in May was toxic to *Daphnia*, and had ammonia levels 2 times the 48h LC50 values for this organism. The compound(s) responsible for toxicity in the #2 Tube Mill or Coke Oven Condenser samples could not be found.

Dafasco Steel

There was one lethal sample from the East Boat Slip Sewer at Dofasco Steel. There were insufficient chemistry analyses conducted to suggest the cause of toxicity in this case. There were four samples from Dofasco Steel (Ottawa Street Sewer, West Bay Front Sewer, and Boiler House Sewer #2) which induced an unusual toxic response in the *Daphnia* test. Studies in the Ministry laboratory indicate that ammonia, cyanide, nickel and some volatile solvents can cause this type of toxic response, but there may be other causes as well. All of the tests on these Dofasco samples resulted in less than 50% mortality at the intermediate concentrations. A Blast furnace recycle system was installed and started up April 16, 1990. This system has resulted in an reduction of effluent volume at the West Bay Front Sewer by 66 m^3/min.

Stelco Steel Hilton Works

There were toxic samples collected from the #1 60 Inch Sewer (Figure 3), #2 Rod Mill and the 20 Inch Mill (Figure 4) of Stelco Steel Hilton Works prior to April 1990. On April

14, 1990 the 20 inch mill was officially closed. On May 17, 1990 the process effluents from the acid regeneration plant and the #3 pickle line were redirected from the #1 60 inch sewer to treatment. This resulted in a subsequent removal of acute toxicity from the #1 60 inch sewer in all samples tested after April 1990. The December sample from the #1 60 inch sewer had pH of 3.7 and a copper level of 63 μg/l, both of which are lethal to *Daphnia*. Similarly, the February sample had a pH of 2.93 and it was toxic to *Daphnia*. The toxic sample collected in March had a neutral pH (6.67), but there were several metals (chromium, copper, aluminum) which combined could account for some of the toxicity. The December sample from the 20 Inch Mill had high levels of oil and grease, and 70 μg/l of copper, both of which could have contributed to its toxicity to *Daphnia*. It was unclear what caused the toxicity for the December sample from the #2 Rod Mill. Stelco Steel Hilton Works was the only other steel mill which had outfalls which induced the unusual toxic responses seen at the Dofasco mill. None of the seven samples (from outfalls 400, 601, 602, 1100, 1900 and 2000) induced mortalities greater than 50% in any of the test concentrations.

Stelco Steel Lake Erie Works

Stelco Steel Lake Erie Works in Nanticoke had two toxic samples from the #4 Pond Discharge. Chemical characterization of these samples did not indicate any specific chemical which might be causing toxicity. It is possible that toxicity might be related to zebra mussel control (eg. chlorination) measures being conducted at some of the facilities located on Lake Erie.

SPECIALTY STEEL/MINI MILLS

Approximately 19% of samples from the specialty steel/mini mills were acutely lethal (48h LC50 ≤ 100%) to *Daphnia magna*. 48.4% were non-lethal and a further 32.3% had LC50s > 100%. There were no unusual toxicity responses in samples from the specialty mills.

Atlas Specialty Steel

Five of the six toxic samples from this group were collected from the 42 Inch Sewer at Atlas Specialty Steel in Welland. Various concentrations/mixtures of metals including copper, chromium, nickel, and aluminum were at or near toxic levels, and could be responsible for the toxicity. There were also occurrences of high concentrations of oil and grease.

IVACO Rolling Mill

One sample collected in January from East Discharge (#200) at IVACO Rolling Mills was acutely lethal to *Daphnia*. This sample had a high pH (9.4), moderately high concentrations of zinc (810 ug/l) and copper (20 ug/l), oil and grease (5 mg/l), and a mixture of low concentrations of volatile organic compounds such as di, tri, and tetrachloroethylenes, benzene, toluene and xylene. All these compounds could have contributed to the toxicity of this sample.

Rainbow Trout Toxicity Test Results

Results for 220 rainbow trout toxicity tests conducted on 220 samples of effluent and intake water were submitted by the seven companies in this sector. An additional 29 audit toxicity tests were conducted by the Aquatic Toxicity Unit of Environment Ontario, and have been included in this report. There are four outstanding requests for resubmission of data due to data entry errors. The database includes 218 test results for integrated mills and 31 test results for the specialty mills. The overall distribution of toxicity of these effluents to rainbow trout is illustrated in Figure 1. Fewer samples were acutely lethal to trout than to *Daphnia*. There were also fewer trout tests with partial mortalities than *Daphnia* tests. Samples which were toxic to trout were not necessarily toxic to *Daphnia*, and vice versa, but 28% of the lethal samples were toxic to both species. The results from audit tests were generally consistent with the results submitted by the companies.

INTEGRATED MILLS

82% of samples tested from integrated mills were not acutely lethal to trout and a further 10% had 96h LC50s > 100%. 8% of the samples were acutely lethal (96h LC50 ≤ 100%) to trout.

Algoma Steel Corporation

Algoma Steel had 10 lethal samples, 9 of which were from the Bar and Strip Lagoon. Much of the toxicity from this site was probably due to cyanide (100 - 650 ug/l), ammonia (800 - 17000 ug/l), and metals (Zn, Cu, Cr). The remaining toxic sample was from the 24 Inch Coke Quench. This sample had very high levels of ammonia, and cyanide = 100 ug/l.

Dofasco Steel

There were five samples from Dofasco which were toxic to trout, and four of these were from the West Bay Front Sewer. The remaining lethal result was from a sample of intake water. It is presently unclear as to the cause(s) of toxicity for these samples.

Stelco Steel Hilton Works

There were three samples of effluent from Stelco Steel Hilton Works which were toxic to trout, and all were from the #1 60 Inch Sewer (#602). A combination of low pH (< 3.8) and high metals levels, particularly copper and chromium, were the likely causes of toxicity in these three samples.

Stelco Steel Lake Erie Works

There were no acutely lethal samples from Stelco Steel Lake Erie Works.

SPECIALTY STEEL/MINI MILLS

There were no acutely lethal samples from any of the specialty steel/mini mills.

Conclusions

In general, *Daphnia magna* was more sensitive than trout to iron and steel mill effluents, although there were a few cases where samples caused mortality in trout, but not toxic to *Daphnia*. Effluents from integrated mills were more toxic to trout than were samples from specialty/ mini mills, and this toxicity may be due to high concentrations of cyanide, ammonia, some metals (particularly copper), and occasionally to adverse pH conditions (> 9 or < 4). Toxicity of these effluents to *Daphnia* may also be due to these causes as well as high concentrations of oil and grease. 3% of integrated mill effluents caused an unusual toxic response, and these may have been due to levels of ammonia, cyanide, or nickel in the samples, and their reaction with our laboratory dilution water.

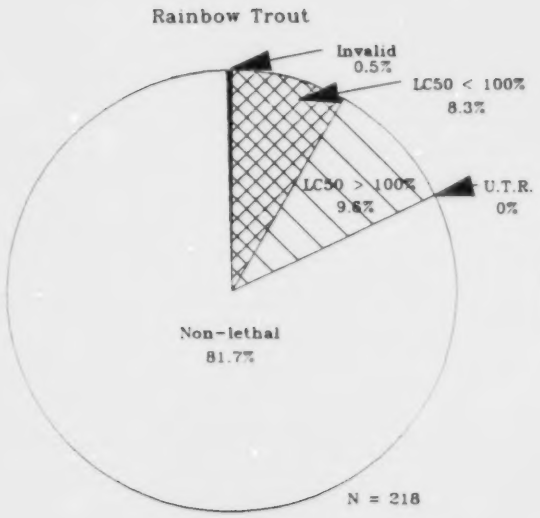
None of the effluent samples from the specialty/ mini mills were acutely lethal to trout. 19.4% of the samples were lethal to *Daphnia*, and this toxicity may be due to mixtures of metals (Cu, Zn, Cr, Ni, Al), and some occurrences of high concentrations of oil and grease and adverse pH.

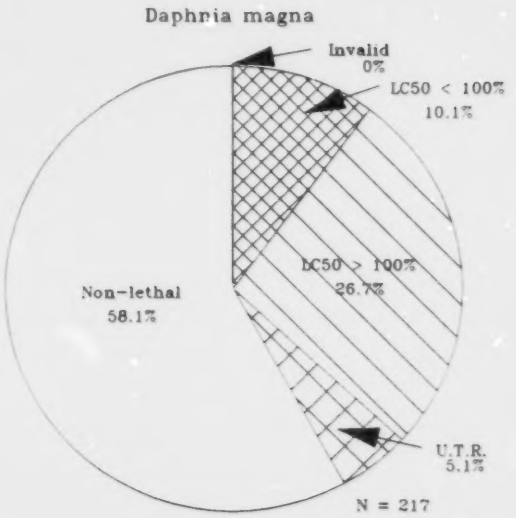
Comments included under each Toxicity Test Report were submitted by the company and their representatives and they should not be expected to be consistent throughout the reports.

Figure 1: Status of acute lethality data for the Iron and Steel Sector. Integrated mills are Algoma Steel Corporation, Dofasco Steel, Stelco Steel Hilton Works and Stelco Steel Lake Erie Works. Specialty steel/mini mills include Atlas Specialty Steel, Lake Ontario Steel Company and IVACO.

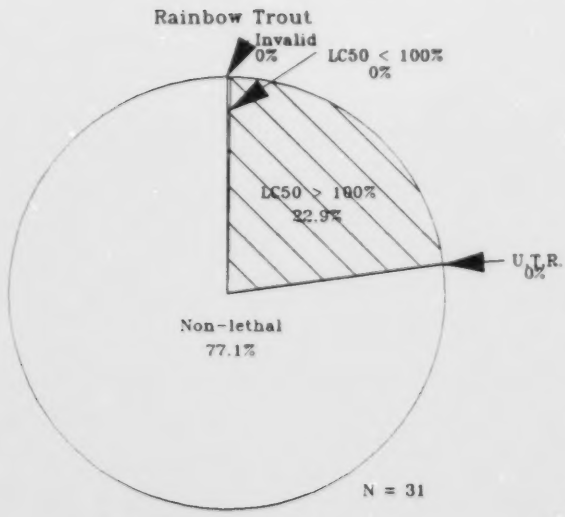
U.T.R. (unusual toxic response) - when the greatest number of mortalities occur in a middle effluent concentration and not the highest concentration tested.

Integrated Mills





Specialty Steel / Mini Mills



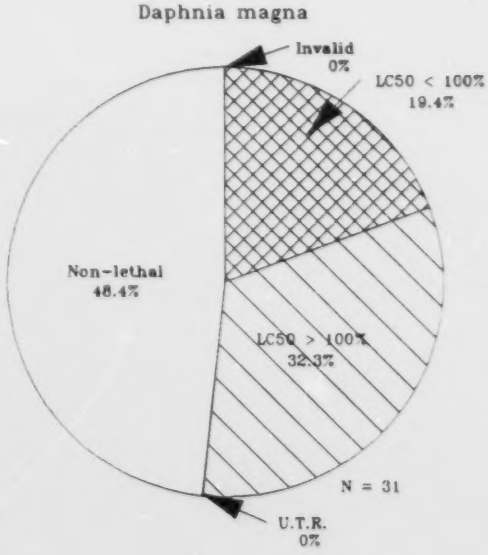


Figure 2: Toxicity of effluent samples from the Bar and Strip Lagoon (#100) at Algoma Steel Corporation, Sault Ste. Marie.

□ - Rainbow Trout
▵ - *Daphnia magna*
Solid symbols are results from Ministry audit tests.

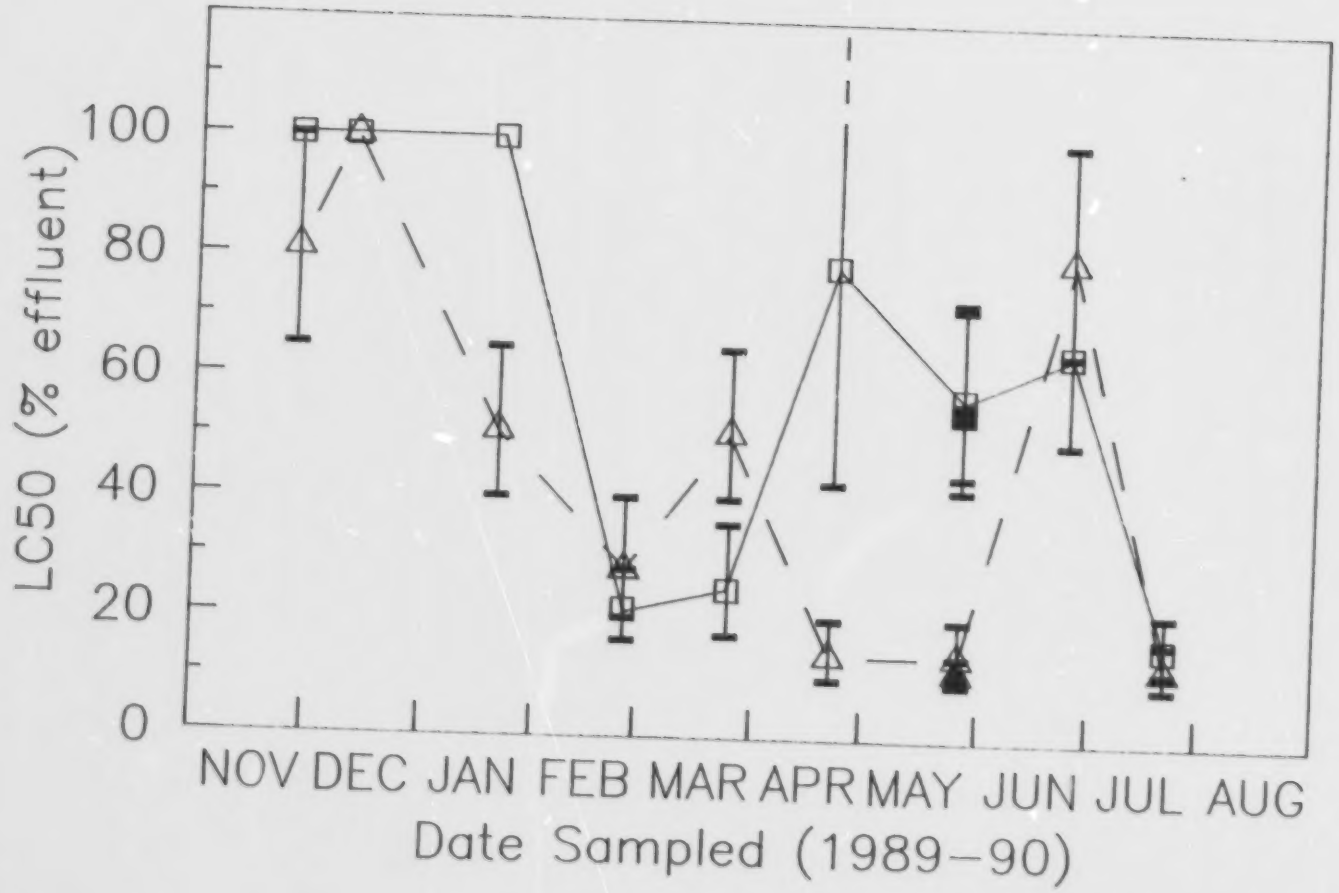

LC50 (% effluent)
100
80
60
40
20
0
NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
Date Sampled (1989–90)

Figure 3: Toxicity of effluent samples from the #1 60 Inch Sewer (#602) at Stelco Steel Hilton Works, Hamilton.

□ - Rainbow Trout
▵ - *Daphnia magna*
Solid symbols are results from Ministry audit tests.

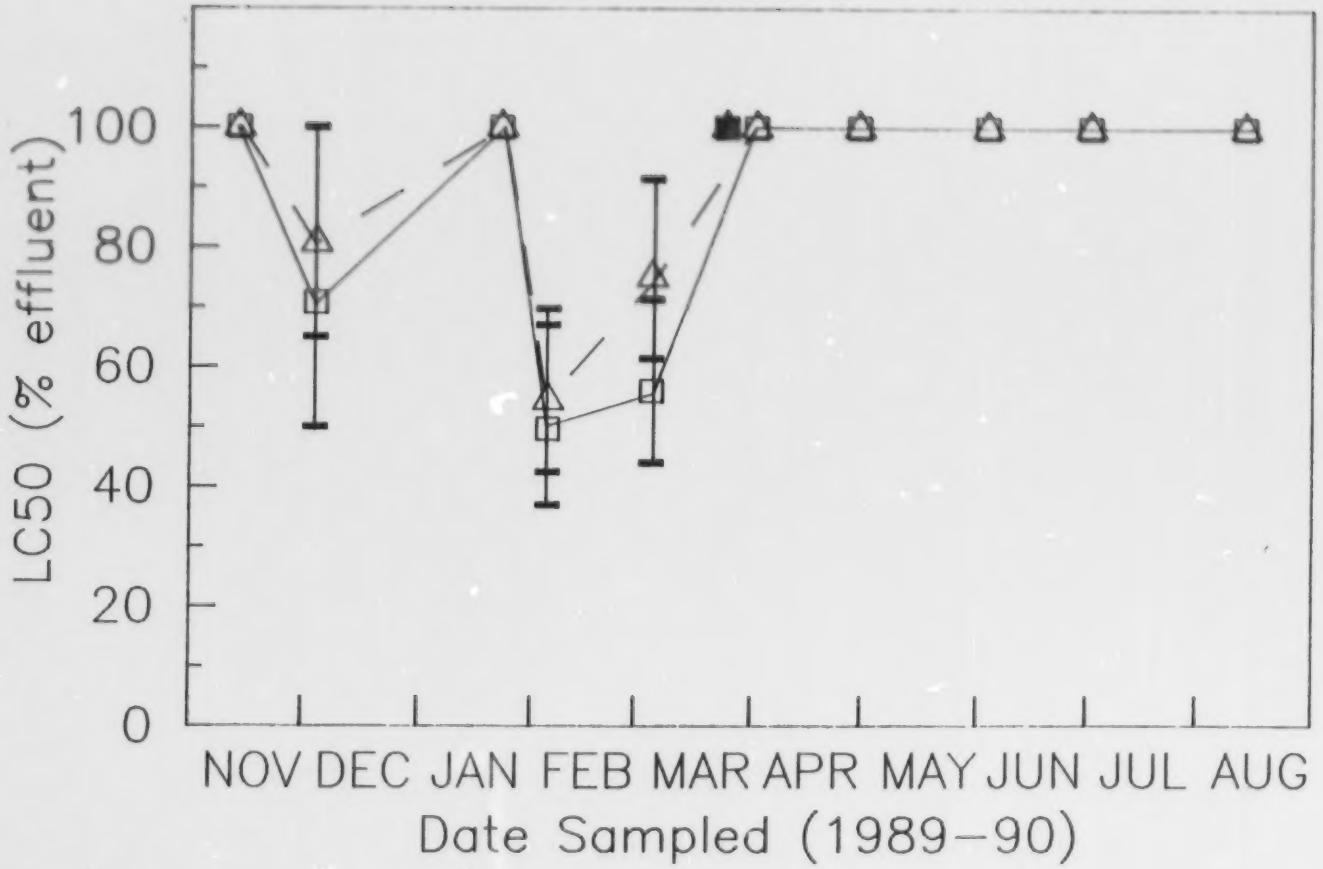

LC50 (% effluent)
100
80
60
40
20
0
NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
Date Sampled (1989–90)

Figure 4: Toxicity of effluent samples from the #2 Rod Mill (#1100) at Stelco Steel Hilton Works, Hamilton.

□ - Rainbow Trout
▵ - *Daphnia magna*
Solid symbols are results from Ministry audit tests.

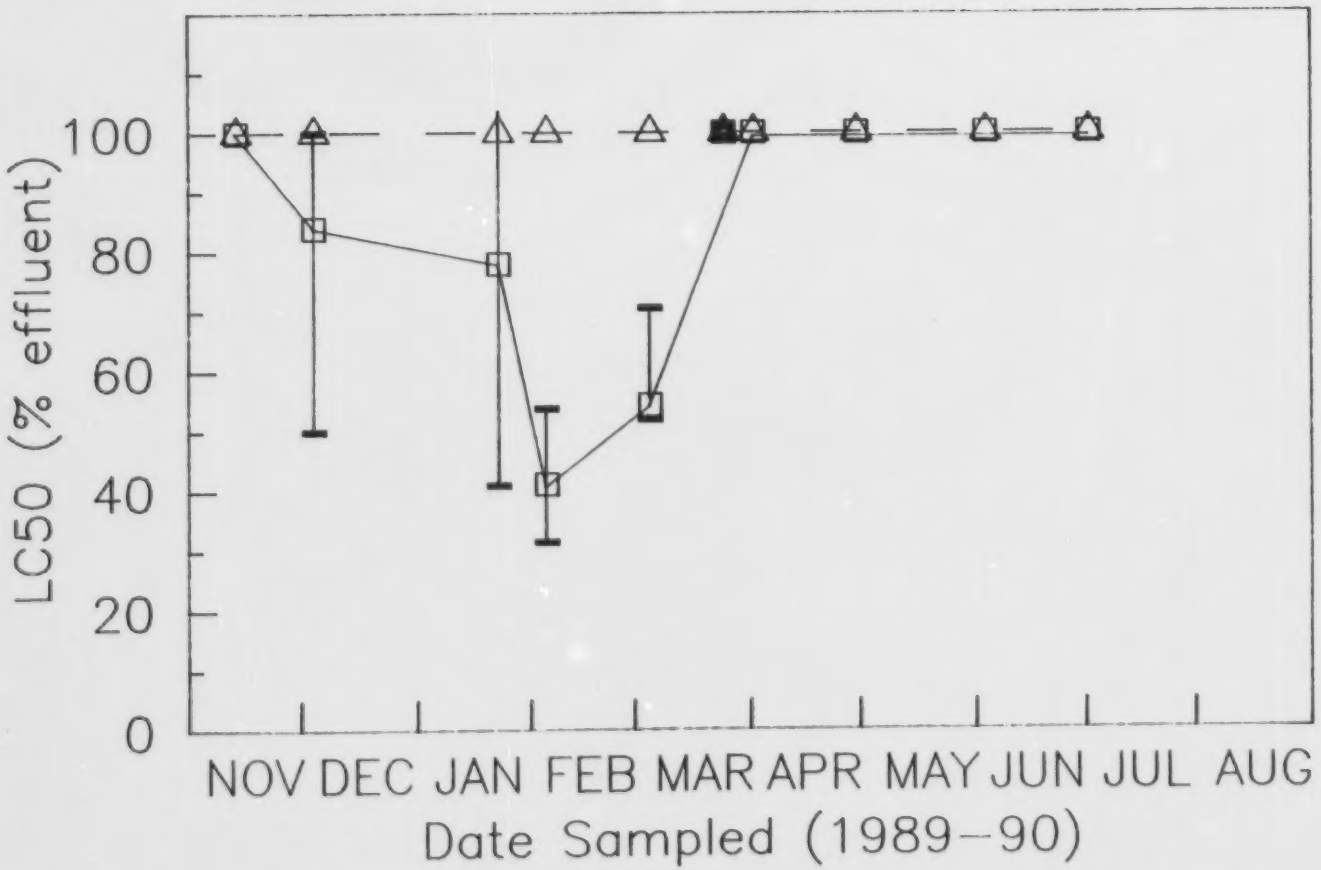
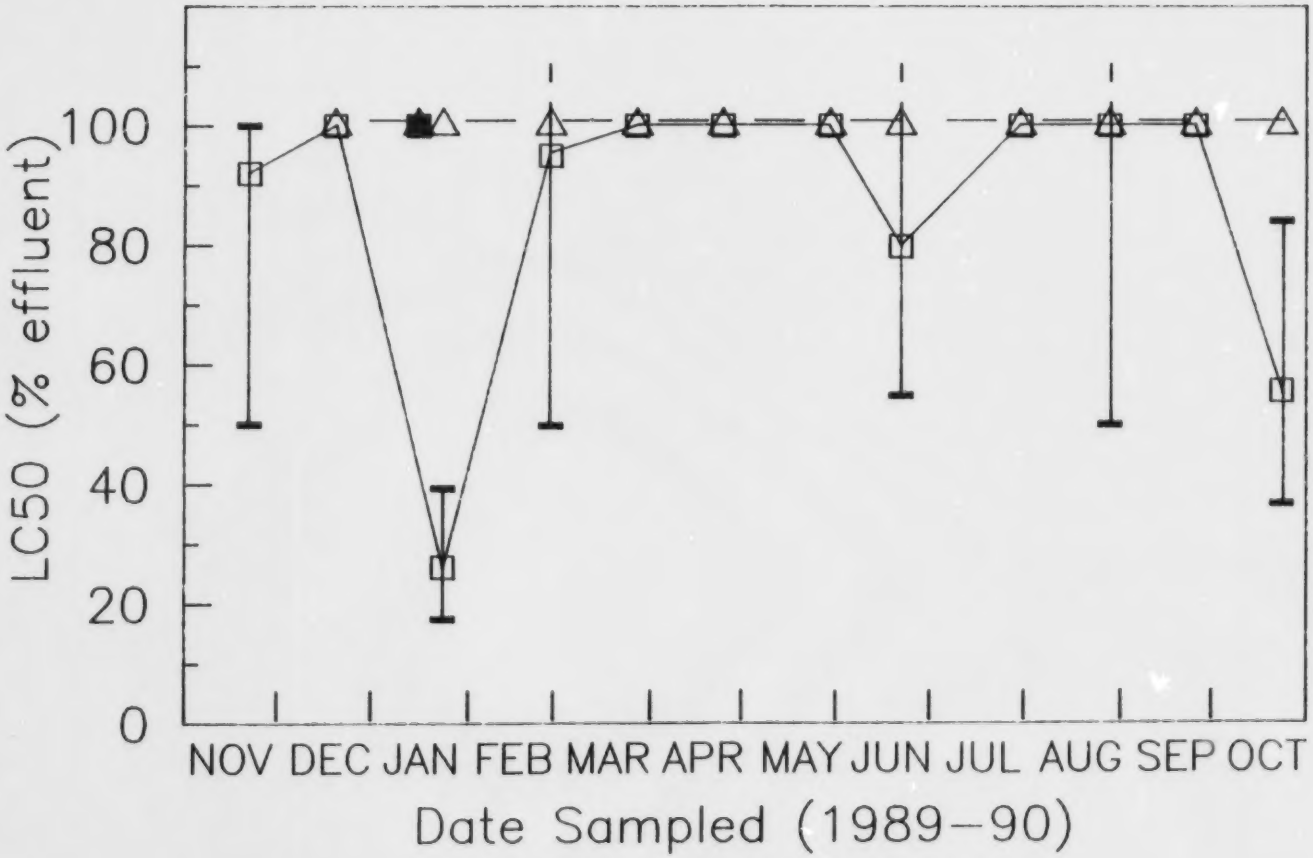

LC50 (% effluent)
100
80
60
40
20
0
NOV DEC JAN FEB MAR APR MAY JUN JUL AUG
Date Sampled (1989–90)

Figure 5: Toxicity of effluent samples from the 42 Inch Sewer (#100) at Atlas Specialty Steel, Welland.

□ - Rainbow Trout
▵ - *Daphnia magna*
Solid symbols are results from Ministry audit tests.


LC50 (% effluent)
100
80
60
40
20
0
NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT
Date Sampled (1989–90)

COMPANY: Algoma Steel, Sault Ste. Marie (40006)
SECTOR: Iron and Steel
REGION: Northeast

SUMMARY
The data for 52 acute lethality trout bioassays conducted on effluent samples collected between November 1989 and July 1990 were submitted by Algoma Steel Corporation. The company was not in operation during part of July , August and September, therefore no tests were conducted for these months.
Samples from the 60" Sewer, 30" Sewer, Tube Mill, Cold Mill 24 inch, Terminal Settling Basin, Boiler House, #2 Steel Making Cooling Water, Cold Mill 20 inch, Cold Oven Condenser, and #2 Tube Mill were either not acutely lethal to trout or had 96 h LC50s >100 %. All the Ministry audit samples collected from the above sites were determined to have been not acutely lethal to trout.
The samples collected from the Bar and Strip Lagoon were found to have been consistently lethal to test fish. Eight of nine samples were determined acutely lethal to trout, producing 96 h LC50s in the range from 11.5 % to 80.6 %. The sample collected in December 1989 was nonlethal. A Ministry audit sample, collected in May, was also determined to have been acutely lethal, producing a 96 h LC50 of 11.5 %. Another Ministry audit sample, collected from the 24 inch Coke Oven Quench discharge proved lethal. The May 1990 sample, when tested, produced a 96 h LC50 of 59.3%.

Bar & Strip Lagoon

03890311 sampled: 11/28/89 LC50: 80.6 %
95% fid. limits: 65.0 - 100.0 %
comments:

03890362 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900073 sampled: 01/22/90 LC50: 51.0 %
95% fid. limits: 40.0 - 65.0 %
comments:

03900156 sampled: 02/26/90 LC50: 28.3 %
95% fid. limits: 20.0 - 40.0 %
comments:

03900246 sampled: 03/26/90 LC50: 51.0 %
95% fid. limits: 40.0 - 65.0 %
comments:

03900328 sampled: 04/23/90 LC50: 14.1 %
95% fid. limits: 10.0 - 20.0 %
comments:

03900423 sampled: 05/28/90 LC50: 14.1 %
95% fid. limits: 10.0 - 20.0 %
comments: Lethal

01900099 sampled: 05/28/90 LC50: 11.5 %
95% fid. limits: 9.4 - 14.0 %
comments: MISA Audit

03900533 sampled: 06/26/90 LC50: 80.6 %
95% fid. limits: 65.0 - 100.0 %
comments:

03900626 sampled: 07/23/90 LC50: 12.6 %
95% fid. limits: 9.4 - 16.9 % slope: 5.5
comments:

60 inch Sewer

03900152 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900089 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900534 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

30 inch Sewer

03900151 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900535 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Tube Mill

03890312 sampled: 11/27/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03890364 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900070 sampled: 01/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900149 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900247 sampled: 03/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; 5% mort.@ 100%

03900329 sampled: 04/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

01900092 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900424 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900536 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900627 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

Cold Mill 24 inch

03900148 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900097 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900537 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Cold Mill Storm Sewer

Terminal Settling Basin

03890313 sampled: 11/27/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03890365 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900071 sampled: 01/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900153 sampled: 02/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Lethal

03900248 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900330 sampled: 04/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900425 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

01900098 sampled: 05/28/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900538 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900628 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

Boiler House

03900426 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900539 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Intake Water

#2 Steel Making CW

03900150 sampled: 02/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

01900094 sampled: 05/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900540 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

#1 Thickener

#2 Thickener

By-products Area

Cold Mill 20 inch

03900154 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900093 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900541 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Coke Oven Condenser

03900155 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900090 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900542 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Rain Gauge

#2 Tube Mill

03890314 sampled: 11/27/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890363 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900072 sampled: 01/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900147 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900249 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900331 sampled: 04/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900368 sampled: 05/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900427 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non lethal

01900100 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900543 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900625 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

#1 Thickener EO

24 inch Coke Quench

01900096 sampled: 05/23/90 LC50: 59.3 %
95% fid. limits: 50.9 - 71.5 %
comments: MISA Audit

MISA Trout

TOXICITY TEST REPORT Sample: 03890311

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/28/89
Received : 11/29/89
Tested : 11/30/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 80.6 %

95% fid. limits : 65.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03890311

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8	7.9			
	O2 ppm	10.4	9.8			
	Cond.	349	358			
	Temp(C)	14.0	15.0			
65	pH	7.8				8.1
	O2 ppm	10.2				9.5
	Cond.	410				447
	Temp(C)	14.0	15.0	14.5	14.5	14.0
40	pH	7.8				8.2
	O2 ppm	10.0				9.3
	Cond.	505				497
	Temp(C)	14.0	15.0	14.5	14.5	14.0
20	pH	7.8				8.3
	O2 ppm	9.5				9.4
	Cond.	577				536
	Temp(C)	14.0	15.0	14.5	14.5	14.0
10	pH	7.8				8.5
	O2 ppm	9.3				9.7
	Cond.	552				552
	Temp(C)	14.0	15.0	14.5	14.5	14.0
Control	pH	7.8				8.3
	O2 ppm	9.1				9.2
	Cond.	576				551
	Temp(C)	14.0	15.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890362

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/18/89 at: 800

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890362

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.1
	O2 ppm	10.3				10.0
	Cond.	306				308
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.8				8.3
	O2 ppm	9.9				9.9
	Cond.	392				400
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.8				8.4
	O2 ppm	9.3				9.9
	Cond.	457				457
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	9.0				10.1
	Cond.	508				505
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	8.6				10.2
	Cond.	533				529
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	8.6				10.0
	Cond.	545				541
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.3				10.1
	Cond.	556				556
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900073

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 01/22/90
Received : 01/25/90
Tested : 01/26/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	100
65	0	10	10	10	10	10	100
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : 51.0 %

95% fid. limits : 40.0 - 65.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900073

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
100	pH	8.1	8.1				
	O2 ppm	10.2	10.2				
	Cond.	268	268				
	Temp(C)	15.0	15.0				
65	pH	8.0	8.0				
	O2 ppm	9.8	9.8				
	Cond.	368	368				
	Temp(C)	15.0	15.0				
40	pH	8.0					8.0
	O2 ppm	9.6					8.3
	Cond.	431					443
	Temp(C)	15.0	15.0	14.5	14.5	14.5	15.0
20	pH	7.9					8.4
	O2 ppm	9.5					9.9
	Cond.	490					488
	Temp(C)	15.0	15.0	14.5	14.5	14.5	15.0
10	pH	7.9					8.3
	O2 ppm	9.4					9.8
	Cond.	506					510
	Temp(C)	15.0	15.0	14.5	14.5	14.5	15.0
5	pH	8.0					8.4
	O2 ppm	9.3					10.0
	Cond.	519					521
	Temp(C)	15.0	15.0	14.5	14.5	14.5	15.0
Control	pH	7.9					8.5
	O2 ppm	9.1					9.9
	Cond.	540					543
	Temp(C)	15.0	15.0	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900156

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	0	10	10	10	10	10	10	100
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 28.3 %

95% fid. limits : 20.0 - 40.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900156

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	8.7	8.7						
	O2 ppm	9.9	9.9						
	Cond.	280	280						
	Temp(C)	15.0	15.0						
65	pH	8.2	8.2						
	O2 ppm	9.4	9.4						
	Cond.	381	381						
	Temp(C)	15.0	15.0						
40	pH	8.0		8.0					
	O2 ppm	9.2		9.2					
	Cond.	444		444					
	Temp(C)	15.0	15.0	15.0					
20	pH	7.9							8.4
	O2 ppm	9.0							9.4
	Cond.	486							496
	Temp(C)	15.0	15.0	15.0	15.0	14.5	14.5	14.0	14.0
10	pH	7.9							8.3
	O2 ppm	8.8							9.2
	Cond.	518							530
	Temp(C)	15.0	15.0	15.0	15.0	14.5	14.5	14.0	14.0
5	pH	7.9							8.4
	O2 ppm	8.7							9.2
	Cond.	536							541
	Temp(C)	15.0	15.0	15.0	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9							8.5
	O2 ppm	8.2							9.5
	Cond.	544							548
	Temp(C)	15.0	15.0	15.0	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900246

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/29/90 at: 910

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	%
100	0	8	10	10	10	10	10	100
65	0	0	8	10	10	10	10	100
40	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : 51.0 %

95% fid. limits : 40.0 - 65.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900246

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00
100	pH	9.2	9.2					
	O2 ppm	11.5	11.5					
	Cond.	293	293					
	Temp(C)	14.0	14.0	14.0				
65	pH	8.6		8.6				
	O2 ppm	10.8		10.8				
	Cond.	386		386				
	Temp(C)	14.0	14.0	14.0	14.0			
40	pH	8.3						8.2
	O2 ppm	10.5						9.1
	Cond.	447						452
	Temp(C)	14.0	14.0	14.0	14.0	14.5	15.0	14.0
20	pH	8.1						8.4
	O2 ppm	10.4						9.1
	Cond.	495						484
	Temp(C)	14.0	14.0	14.0	14.0	14.5	15.0	14.0
10	pH	8.0						8.4
	O2 ppm	10.4						9.1
	Cond.	516						513
	Temp(C)	14.0	14.0	14.0	14.0	14.5	15.0	14.0
5	pH	8.0						8.2
	O2 ppm	9.4						8.5
	Cond.	527						526
	Temp(C)	14.0	14.0	14.0	14.0	14.5	15.0	14.0
Control	pH	8.0						8.4
	O2 ppm	8.9						8.6
	Cond.	538						535
	Temp(C)	14.0	14.0	14.0	14.0	14.5	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900328

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/25/90 at: 1455

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
20	0	1	1	1	10	10	10	10	100
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 14.1 %

95% fid. limits : 10.0 - 20.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900328

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	8.9	8.9						
	O2 ppm	9.8	9.8						
	Cond.	256	256						
	Temp(C)	15.0	15.0						
65	pH	8.3	8.3						
	O2 ppm	9.4	9.4						
	Cond.	362	362						
	Temp(C)	15.0	15.0						
40	pH	8.1	8.1						
	O2 ppm	9.3	9.3						
	Cond.	438	438						
	Temp(C)	15.0	15.0						
20	pH	8.0				8.4			
	O2 ppm	9.3				9.5			
	Cond.	494				481			
	Temp(C)	15.0	15.0	15.0	15.0	15.5			
10	pH	7.9							8.2
	O2 ppm	9.2							9.5
	Cond.	523							509
	Temp(C)	15.0	15.0	15.0	15.0	15.5	15.5	15.5	15.5
5	pH	7.9							8.1
	O2 ppm	9.3							8.8
	Cond.	537							525
	Temp(C)	15.0	15.0	15.0	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9							8.2
	O2 ppm	8.9							8.9
	Cond.	550							538
	Temp(C)	15.0	15.0	15.0	15.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900423

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 920

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
20	0	0	1	8	10	10	10	10	100
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 14.1 %

95% fid. limits : 10.0 - 20.0 %

Comments : Lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric mean

TOXICITY TEST PARAMETERS

Sample Number: 03900423

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	9.2	9.2						
	O2 ppm	9.6	9.6						
	Cond.	278	278						
	Temp(C)	15.0	15.0						
65	pH	8.6	8.6						
	O2 ppm	9.2	9.2						
	Cond.	372	372						
	Temp(C)	15.0	15.0						
40	pH	8.2	8.2						
	O2 ppm	8.8	8.8						
	Cond.	440	440						
	Temp(C)	15.0	15.0						
20	pH	8.0			8.0				
	O2 ppm	8.6			8.6				
	Cond.	488			488				
	Temp(C)	15.0	15.0	15.0	15.0	15.5			
10	pH	7.9							8.3
	O2 ppm	8.5							9.0
	Cond.	515							515
	Temp(C)	15.0	15.0	15.0	15.0	15.5	15.0	15.5	16.0
5	pH	7.9							8.3
	O2 ppm	8.5							9.1
	Cond.	527							523
	Temp(C)	15.0	15.0	15.0	15.0	15.5	15.0	15.5	16.0
Control	pH	7.9							8.4
	O2 ppm	8.9							9.0
	Cond.	539							529
	Temp(C)	15.0	15.0	15.0	15.0	15.5	15.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900099

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/28/90
Received : 05/31/90
Tested : 06/01/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	25:00	48:30	71:00	96:00	%
100	0	10	10	10	10	10	100
65	0	10	10	10	10	10	100
40	0	10	10	10	10	10	100
30	0	10	10	10	10	10	100
20	0	10	10	10	10	10	100
10	0	0	3	3	3	3	30
5	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Control							0

96 Hour LC50 : 11.5 %

95% fid. limits : 9.4 - 14.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 01900099

TEST CONC. %		ELAPSED TIME 00:00	04:00	25:00	48:30	71:00	96:00
100	pH	8.9	8.9				
	O2 ppm	9.1	9.5				
	Cond.	205	205				
	Temp(C)	15.0	15.0				
65	pH		8.4				
	O2 ppm		9.2				
	Cond.		225				
	Temp(C)		15.0				
40	pH		8.2				
	O2 ppm		9.2				
	Cond.		240				
	Temp(C)		15.0				
30	pH		8.1				
	O2 ppm		9.7				
	Cond.		245				
	Temp(C)		15.0				
20	pH		7.9				
	O2 ppm		9.6				
	Cond.		250				
	Temp(C)		15.0				
10	pH		7.8	7.8	7.7	7.8	7.8
	O2 ppm		9.5	9.2	9.8	9.7	9.2
	Cond.		260	200	245	260	260
	Temp(C)		15.0	15.0	15.0	15.0	15.0
5	pH		7.8	7.5	7.6	7.7	7.7
	O2 ppm		9.4	9.2	9.8	9.7	9.5
	Cond.		265	235	250	265	265
	Temp(C)		15.0	15.0	15.0	15.0	15.0
1	pH		7.7	7.7	7.7	7.8	7.8
	O2 ppm		9.3	9.3	9.7	9.7	9.2
	Cond.		265	240	255	265	265
	Temp(C)		15.0	15.0	15.0	15.0	15.0
Control	pH	7.5	7.4	7.6		7.6	7.7
	O2 ppm	8.7	9.1	9.5		9.6	9.5
	Cond.	135	135	135		140	150
	Temp(C)	15.0	15.0	15.0		15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900533

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/26/90
Received : 06/27/90
Tested : 06/28/90 at: 1530

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	10	10	10	100
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	1	10
10	0	0	0	1	1	10
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 80.6 %

95% fid. limits : 65.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900533

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7		7.7		
	O2 ppm	9.0		8.1		
	Cond.	212		219		
	Temp(C)	16.0	15.5	15.5		
65	pH	7.8				8.3
	O2 ppm	9.2				9.6
	Cond.	332				335
	Temp(C)	16.0	15.5	15.5	15.5	15.5
40	pH	7.9				8.3
	O2 ppm	9.2				9.4
	Cond.	412				416
	Temp(C)	16.0	15.5	15.5	15.5	15.5
20	pH	7.9				8.2
	O2 ppm	9.2				8.8
	Cond.	473				476
	Temp(C)	16.0	15.5	15.5	15.5	15.5
10	pH	7.9				8.4
	O2 ppm	9.2				9.2
	Cond.	505				507
	Temp(C)	16.0	15.5	15.5	15.5	15.5
5	pH	7.9				8.2
	O2 ppm	9.2				8.9
	Cond.	518				522
	Temp(C)	16.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.2
	O2 ppm	9.3				8.9
	Cond.	534				536
	Temp(C)	16.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900626

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/25/90 at: 1610

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	100
65	0	10	10	10	10	10	100
40	0	10	10	10	10	10	100
20	0	0	10	10	10	10	100
10	0	0	1	1	1	1	10
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : 12.6 %

95% fid. limits : 9.4 - 16.9 %

Comments :

SLOPE of Mortality Curve : 5.5
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900626

TEST CONC. %		ELAPSED TIME					
		00:00	01:00	24:00	48:00	72:00	96:00
100	pH	9.0	9.0				
	O2 ppm	9.8	9.8				
	Cond.	294	294				
	Temp(C)	16.0	15.5				
65	pH	8.3	8.3				
	O2 ppm	9.7	9.7				
	Cond.	391	391				
	Temp(C)	16.0	15.5				
40	pH	8.1	8.1				
	O2 ppm	9.6	9.6				
	Cond.	445	445				
	Temp(C)	16.0	15.5				
20	pH	7.9		8.1			
	O2 ppm	9.4		9.4			
	Cond.	492		501			
	Temp(C)	16.0	15.5	15.5			
10	pH	7.9					8.3
	O2 ppm	9.4					9.2
	Cond.	513					511
	Temp(C)	16.0	15.5	15.5	15.0	14.5	14.5
5	pH	7.8					8.4
	O2 ppm	9.3					8.7
	Cond.	519					522
	Temp(C)	16.0	15.5	15.5	15.0	14.5	14.5
Control	pH	7.8					8.3
	O2 ppm	9.3					9.1
	Cond.	542					535
	Temp(C)	16.0	15.5	15.5	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900152

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 60 inch Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1030

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900152

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.9
	O2 ppm	9.9				9.7
	Cond.	114				123
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	7.9				8.0
	O2 ppm	9.3				9.4
	Cond.	274				285
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	7.9				8.3
	O2 ppm	9.0				9.8
	Cond.	379				384
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	8.9				9.7
	Cond.	463				472
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	8.8				9.7
	Cond.	502				509
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	8.7				9.5
	Cond.	518				524
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.1				9.4
	Cond.	544				558
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900089

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 60 inch Sewer, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/25/90
Tested : 05/25/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	25:00	49:00	69:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900089

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	25:00	49:00	69:00	96:00
100	pH	7.4	7.5	7.7	7.7	7.5	7.5	
	O2 ppm	9.5	9.0	9.5	9.7	9.4	9.8	
	Cond.	90	90	130	130	100	90	
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	
65	pH		7.7	7.7	7.6	7.5	7.7	
	O2 ppm		9.0	9.4	9.6	9.3	9.9	
	Cond.		150	200	200	155	150	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
40	pH		7.7	7.7	7.6	7.5	7.8	
	O2 ppm		8.9	9.5	9.4	9.0	9.9	
	Cond.		195	250	250	195	195	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
30	pH		7.8	7.7	7.7	7.6	7.8	
	O2 ppm		8.8	9.7	9.6	9.3	9.9	
	Cond.		210	265	275	215	210	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
20	pH		7.7	7.6	7.7	7.6	7.8	
	O2 ppm		8.9	9.4	9.5	9.3	9.9	
	Cond.		225	290	295	230	225	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
10	pH		7.9	7.5	7.8	7.6	7.8	
	O2 ppm		8.9	9.2	9.6	9.2	9.8	
	Cond.		250	305	310	245	240	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
Control	pH		7.7	7.2	7.7	7.5	7.9	
	O2 ppm		8.7	8.9	9.8	9.2	9.9	
	Cond.		260	315	325	250	255	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	

MISA Trout

TOXICITY TEST REPORT Sample: 03900534

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 60 inch Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1535

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900534

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.9
	O2 ppm	9.4				9.7
	Cond.	111				116
	Temp(C)	16.0	15.5	15.5	15.5	15.5
65	pH	7.9				8.3
	O2 ppm	9.3				9.7
	Cond.	281				273
	Temp(C)	16.0	15.5	15.5	15.5	15.5
40	pH	7.9				8.3
	O2 ppm	9.2				9.5
	Cond.	374				375
	Temp(C)	16.0	15.5	15.5	15.5	15.5
20	pH	7.9				8.3
	O2 ppm	8.9				9.5
	Cond.	457				456
	Temp(C)	16.0	15.5	15.5	15.5	15.5
10	pH	7.9				8.4
	O2 ppm	8.7				9.5
	Cond.	501				491
	Temp(C)	16.0	15.5	15.5	15.5	15.5
5	pH	7.9				8.4
	O2 ppm	8.8				9.3
	Cond.	513				511
	Temp(C)	16.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.5				9.1
	Cond.	537				533
	Temp(C)	16.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900151

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 30 inch Sewer, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1015

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900151

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.6
	O2 ppm	9.9				9.0
	Cond.	136				142
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	7.9				8.1
	O2 ppm	9.5				9.5
	Cond.	291				299
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	7.9				8.3
	O2 ppm	9.4				9.7
	Cond.	391				396
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	7.9				8.2
	O2 ppm	9.3				9.2
	Cond.	467				471
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	7.9				8.1
	O2 ppm	9.2				8.9
	Cond.	508				521
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	7.9				8.3
	O2 ppm	9.1				9.6
	Cond.	525				533
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.2				9.2
	Cond.	542				544
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900535

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 30 inch Sewer, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1540

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900535

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.8
	O2 ppm	9.3				9.3
	Cond.	148				154
	Temp(C)	16.0	15.5	15.5	15.5	15.5
65	pH	7.8				8.2
	O2 ppm	9.2				9.4
	Cond.	291				296
	Temp(C)	16.0	15.5	15.5	15.5	15.5
40	pH	7.9				8.2
	O2 ppm	9.1				9.4
	Cond.	387				393
	Temp(C)	16.0	15.5	15.5	15.5	15.5
20	pH	7.9				8.4
	O2 ppm	9.1				9.5
	Cond.	459				464
	Temp(C)	16.0	15.5	15.5	15.5	15.5
10	pH	7.9				8.3
	O2 ppm	8.9				9.4
	Cond.	493				498
	Temp(C)	16.0	15.5	15.5	15.5	15.5
5	pH	7.9				8.4
	O2 ppm	8.9				9.5
	Cond.	515				516
	Temp(C)	16.0	15.5	15.5	15.5	15.5
Control	pH	7.8				8.4
	O2 ppm	8.8				9.5
	Cond.	533				532
	Temp(C)	16.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890312

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/27/89
Received : 11/29/89
Tested : 11/30/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890312

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.8				7.6
	O2 ppm	10.5				9.2
	Cond.	187				203
	Temp(C)	15.0	15.0	14.5	14.5	14.0
65	pH	8.1				8.1
	O2 ppm	10.3				9.4
	Cond.	330				346
	Temp(C)	15.0	15.0	14.5	14.5	14.0
40	pH	7.9				8.2
	O2 ppm	10.1				9.6
	Cond.	425				436
	Temp(C)	15.0	15.0	14.5	14.5	14.0
20	pH	7.8				8.4
	O2 ppm	9.7				9.5
	Cond.	496				501
	Temp(C)	15.0	15.0	14.5	14.5	14.0
10	pH	7.8				8.4
	O2 ppm	9.6				9.4
	Cond.	536				541
	Temp(C)	15.0	15.0	14.5	14.5	14.0
Control	pH	7.8				8.3
	O2 ppm	9.4				9.2
	Cond.	564				572
	Temp(C)	15.0	15.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890364

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/18/89 at: 820

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890364

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.0				9.9
	Cond.	230				228
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	8.0				8.3
	O2 ppm	9.6				9.7
	Cond.	349				353
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.4
	O2 ppm	9.2				9.7
	Cond.	433				432
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	8.9				10.0
	Cond.	498				496
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	8.6				9.9
	Cond.	530				524
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	8.5				10.0
	Cond.	545				535
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.4				9.9
	Cond.	555				556
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900070

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Tube Mill, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 01/22/90
Received	: 01/25/90
Tested	: 01/26/90 at: 1500
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900070

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.8
	O2 ppm	9.6				9.9
	Cond.	128				135
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.9				8.1
	O2 ppm	9.5				9.9
	Cond.	279				284
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.2
	O2 ppm	9.1				9.8
	Cond.	381				383
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.0				8.4
	O2 ppm	8.7				10.1
	Cond.	462				459
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.3
	O2 ppm	8.7				9.6
	Cond.	498				498
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.5
	O2 ppm	8.8				10.1
	Cond.	517				512
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.5
	O2 ppm	8.6				10.0
	Cond.	540				545
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900149

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Tube Mill, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 02/26/90
Received	: 02/28/90
Tested	: 03/01/90 at: 1400
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900149

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.8
	O2 ppm	10.1				8.9
	Cond.	133				136
	Temp(C)	15.0	14.5	14.5	14.0	14.0
100	pH	8.1				7.9
	O2 ppm	10.1				9.2
	Cond.	133				142
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				8.6
	Cond.	544				543
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.2				9.2
	Cond.	544				541
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900247

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/29/90 at: 900

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
100	0	0	0	0	1	10
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; 5% mort.@ 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900247

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				7.7
	O2 ppm	11.1				8.9
	Cond.	158				159
	Temp(C)	15.0	14.5	15.0	14.5	14.0
100	pH	8.3				7.7
	O2 ppm	11.1				8.8
	Cond.	158				159
	Temp(C)	15.0	14.5	15.0	14.5	14.0
Control	pH	8.0				8.2
	O2 ppm	9.7				8.0
	Cond.	530				536
	Temp(C)	15.0	14.5	15.0	14.5	14.0
Control	pH	8.0				8.2
	O2 ppm	9.7				8.7
	Cond.	530				531
	Temp(C)	15.0	14.5	15.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900329

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/25/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900329

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				7.5
	O2 ppm	9.3				9.0
	Cond.	141				142
	Temp(C)	15.0	15.5	15.5	15.5	15.5
100	pH	8.2				7.6
	O2 ppm	9.3				9.1
	Cond.	141				143
	Temp(C)	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.2
	O2 ppm	9.5				9.3
	Cond.	551				534
	Temp(C)	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	9.5				9.2
	Cond.	551				534
	Temp(C)	15.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900092

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Tube Mill, (400)
Laboratory	: MOE
Sampling Method	: Grab
Sampled By	: L. McCormack
Date Collected	: 05/23/90
Received	: 05/28/90
Tested	: 05/28/90 at: 1500
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	00:30	01:00	18:30	41:30	65:30	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900092

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	18:30	41:30	65:30	96:00
100	pH	7.8	8.0	7.7	7.7	7.6	7.5	
	O2 ppm	8.4	9.5	9.7	9.8	9.8	9.7	
	Cond.	125	130	120	125	130	130	
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	
65	pH		8.0	7.9	7.9	7.7	7.7	
	O2 ppm		9.5	9.8	9.9	9.9	10.0	
	Cond.		185	180	175	175	180	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
40	pH		7.9	8.0	7.9	7.8	7.7	
	O2 ppm		9.7	9.8	9.9	9.9	9.9	
	Cond.		220	210	210	210	215	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
30	pH		7.8	8.0	8.0	7.8	7.8	
	O2 ppm		9.8	9.9	10.0	10.0	10.0	
	Cond.		235	225	225	225	230	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
20	pH		7.9	8.0	7.9	7.8	7.8	
	O2 ppm		9.8	9.7	9.9	9.9	10.0	
	Cond.		250	240	235	240	245	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
10	pH		7.8	7.5	7.9	7.8	7.8	
	O2 ppm		9.8	8.2	9.8	9.7	9.9	
	Cond.		260	255	255	255	255	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
Control	pH		7.5	8.0	7.9	7.8	7.8	
	O2 ppm		9.7	9.7	9.8	9.9	9.8	
	Cond.		260	260	265	265	265	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	

MISA Trout

TOXICITY TEST REPORT Sample: 03900424

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/30/90 at: 1640

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900424

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.9
	O2 ppm	9.1				8.3
	Cond.	166				172
	Temp(C)	15.0	15.0	15.0	15.5	15.5
100	pH	8.1				7.6
	O2 ppm	9.1				8.2
	Cond.	166				173
	Temp(C)	15.0	15.0	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.7				8.3
	Cond.	538				536
	Temp(C)	15.0	15.0	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.7				8.3
	Cond.	538				535
	Temp(C)	15.0	15.0	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900536

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1445

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900536

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.9
	O2 ppm	9.1				9.4
	Cond.	140				146
	Temp(C)	16.0	16.0	15.5	15.5	15.5
100	pH	7.7				8.0
	O2 ppm	9.1				9.5
	Cond.	140				145
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	9.1				9.3
	Cond.	538				534
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	9.1				9.4
	Cond.	538				537
	Temp(C)	16.0	16.0	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900627

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Tube Mill, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 07/23/90
Received	: 07/25/90
Tested	: 07/25/90 at: 1620
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900627

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.8
	O2 ppm	9.7				9.3
	Cond.	128				142
	Temp(C)	16.0	15.5	15.0	14.5	14.5
100	pH	7.8				7.7
	O2 ppm	9.7				9.3
	Cond.	128				135
	Temp(C)	16.0	15.5	15.0	14.5	14.5
Control	pH	7.8				8.3
	O2 ppm	9.4				9.2
	Cond.	543				532
	Temp(C)	16.0	15.5	15.0	14.5	14.5
Control	pH	7.8				8.2
	O2 ppm	9.4				9.0
	Cond.	543				535
	Temp(C)	16.0	15.5	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900148

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 24 inch, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900148

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.9
	O2 ppm	10.4				9.4
	Cond.	116				121
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	7.9				8.1
	O2 ppm	9.8				9.2
	Cond.	280				285
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	7.9				8.4
	O2 ppm	9.6				9.4
	Cond.	374				377
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	9.3				9.2
	Cond.	458				465
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	7.9				8.2
	O2 ppm	9.2				8.6
	Cond.	506				507
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	9.1				9.2
	Cond.	523				526
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				8.9
	Cond.	543				542
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900097

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 24 inch, (500)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	00:30	01:00	19:00	42:00	66:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900097

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	19:00	42:00	66:00	96:00
100	pH	7.5	7.9		7.6	7.6	7.6	7.5
	O2 ppm	9.1	9.7		9.7	9.5	9.3	9.7
	Cond.	90	100		90	90	90	90
	Temp(C)	15.6	15.0		15.0	15.0	15.0	15.0
65	pH		7.8		7.8	7.8	7.7	7.7
	O2 ppm		9.7		9.8	9.6	9.3	9.9
	Cond.		165		155	150	155	155
	Temp(C)		15.0		15.0	15.0	15.0	15.0
40	pH		7.8		7.9	7.8	7.8	7.7
	O2 ppm		9.7		9.1	9.6	9.3	9.8
	Cond.		205		200	200	200	200
	Temp(C)		15.0		15.0	15.0	15.0	15.0
30	pH		7.8		8.0	8.0	7.8	7.8
	O2 ppm		9.8		9.8	9.7	9.3	9.9
	Cond.		225		215	215	215	210
	Temp(C)		15.0		15.0	15.0	15.0	15.0
20	pH		7.8		8.0	8.0	7.9	7.8
	O2 ppm		9.8		9.9	9.7	9.5	9.9
	Cond.		240		235	230	235	235
	Temp(C)		15.0		15.0	15.0	15.0	15.0
10	pH		7.8		8.0	8.0	7.9	7.8
	O2 ppm		9.8		9.9	9.7	9.4	9.9
	Cond.		255		250	250	250	255
	Temp(C)		15.0		15.0	15.0	15.0	15.0
Control	pH		7.8		8.0	8.0	7.9	7.8
	O2 ppm		9.7		9.8	9.4	9.2	9.8
	Cond.		255		270	265	265	270
	Temp(C)		15.0		15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900537

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Cold Mill 24 inch, (500)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 06/25/90
Received	: 06/27/90
Tested	: 06/28/90 at: 1525
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900537

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.9
	O2 ppm	9.6				9.5
	Cond.	112				119
	Temp(C)	15.5	15.5	16.0	16.0	16.0
65	pH	7.9				8.1
	O2 ppm	9.5				9.3
	Cond.	270				277
	Temp(C)	15.5	15.5	16.0	16.0	16.0
40	pH	7.9				8.4
	O2 ppm	9.4				9.6
	Cond.	372				378
	Temp(C)	15.5	15.5	16.0	16.0	16.0
20	pH	7.9				8.4
	O2 ppm	9.2				9.4
	Cond.	450				458
	Temp(C)	15.5	15.5	16.0	16.0	16.0
10	pH	7.9				8.4
	O2 ppm	9.1				9.4
	Cond.	494				501
	Temp(C)	15.5	15.5	16.0	16.0	16.0
5	pH	7.9				8.5
	O2 ppm	9.2				9.6
	Cond.	511				513
	Temp(C)	15.5	15.5	16.0	16.0	16.0
Control	pH	7.9				8.5
	O2 ppm	8.5				9.5
	Cond.	535				536
	Temp(C)	15.5	15.5	16.0	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890313

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/27/89
Received : 11/29/89
Tested : 11/30/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	1	1	10
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890313

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.7
	O2 ppm	10.1				9.4
	Cond.	207				226
	Temp(C)	15.0	15.0	14.5	14.5	14.0
65	pH	7.8				8.2
	O2 ppm	9.8				9.4
	Cond.	341				354
	Temp(C)	15.0	15.0	14.5	14.5	14.0
40	pH	7.8				8.4
	O2 ppm	9.7				9.6
	Cond.	428				441
	Temp(C)	15.0	15.0	14.5	14.5	14.0
20	pH	7.8				8.4
	O2 ppm	9.6				9.5
	Cond.	500				511
	Temp(C)	15.0	15.0	14.5	14.5	14.0
10	pH	7.8				8.5
	O2 ppm	9.3				9.5
	Cond.	539				546
	Temp(C)	15.0	15.0	14.5	14.5	14.0
Control	pH	7.8				8.4
	O2 ppm	9.3				9.3
	Cond.	570				570
	Temp(C)	15.0	15.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890365

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/18/89 at: 830

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890365

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.9
	O2 ppm	10.1				10.1
	Cond.	189				188
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.9				8.1
	O2 ppm	9.6				9.7
	Cond.	322				323
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.8				8.3
	O2 ppm	9.1				9.4
	Cond.	411				418
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.4
	O2 ppm	8.6				9.7
	Cond.	508				510
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.7				8.4
	O2 ppm	8.5				9.6
	Cond.	518				518
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.7				8.4
	O2 ppm	8.5				9.4
	Cond.	546				539
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.7				10.1
	Cond.	555				554
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900071

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 01/22/90
Received : 01/25/90
Tested : 01/26/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900071

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.7
	O2 ppm	10.1				9.8
	Cond.	198				205
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.8				8.1
	O2 ppm	9.7				9.9
	Cond.	322				329
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.1
	O2 ppm	9.5				9.5
	Cond.	412				416
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.3
	O2 ppm	9.3				9.8
	Cond.	476				476
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.3
	O2 ppm	9.2				9.9
	Cond.	506				504
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.7
	O2 ppm	9.1				10.2
	Cond.	520				524
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.5
	O2 ppm	9.0				10.0
	Cond.	540				543
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900153

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1415

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	1	1	10
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900153

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.7
	O2 ppm	10.4				9.7
	Cond.	205				213
	Temp(C)	15.0	14.5	14.5	14.0	14.0
100	pH	7.7				7.6
	O2 ppm	10.4				9.4
	Cond.	205				213
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				9.5
	Cond.	544				550
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				9.5
	Cond.	544				551
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900248

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Terminal Settling Basin, (700)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 03/26/90
Received	: 03/28/90
Tested	: 03/29/90 at: 920
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900248

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.4
	O2 ppm	11.3				7.6
	Cond.	199				197
	Temp(C)	15.0	14.5	15.0	14.5	14.5
100	pH	8.0				7.6
	O2 ppm	11.3				8.3
	Cond.	199				198
	Temp(C)	15.0	14.5	15.0	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.6				8.4
	Cond.	529				526
	Temp(C)	15.0	14.5	15.0	14.5	14.5
Control	pH	7.9				8.3
	O2 ppm	9.6				8.2
	Cond.	529				525
	Temp(C)	15.0	14.5	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900330

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/25/90 at: 1505

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900330

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.5				7.1
	O2 ppm	9.5				8.4
	Cond.	232				236
	Temp(C)	15.0	15.5	15.5	15.5	15.5
100	pH	7.5				7.3
	O2 ppm	9.5				9.0
	Cond.	232				235
	Temp(C)	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	9.2				9.4
	Cond.	548				530
	Temp(C)	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.2
	O2 ppm	9.2				9.4
	Cond.	548				533
	Temp(C)	15.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900425

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/30/90 at: 1635

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900425

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.4				7.7
	O2 ppm	9.0				8.4
	Cond.	282				286
	Temp(C)	15.0	15.0	15.0	15.5	15.5
100	pH	7.4				7.7
	O2 ppm	9.0				8.4
	Cond.	282				285
	Temp(C)	15.0	15.0	15.0	15.5	15.5
Control	pH	7.8				8.3
	O2 ppm	8.6				8.3
	Cond.	536				538
	Temp(C)	15.0	15.0	15.0	15.5	15.5
Control	pH	7.8				8.4
	O2 ppm	8.6				8.3
	Cond.	536				536
	Temp(C)	15.0	15.0	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900098

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/28/90
Received : 05/31/90
Tested : 06/01/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	26:00	49:00	71:00	96:00	%
100	0	0	0	0	0	1	1	10
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900098

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	26:00	49:00	71:00	96:00
100	pH	6.6		7.3	7.4	7.4	7.4	7.5
	O2 ppm	8.0		9.6	9.9	9.9	9.8	9.4
	Cond.	150		145	160	150	150	150
	Temp(C)	15.0		15.0	15.0	15.0	15.0	15.0
65	pH			7.4	7.3	7.3	7.4	7.6
	O2 ppm			9.4	9.5	9.6	9.5	9.5
	Cond.			185	190	180	190	190
	Temp(C)			15.0	15.0	15.0	15.0	15.0
40	pH			7.5	7.5	7.5	7.7	7.7
	O2 ppm			9.5	9.9	9.8	9.7	9.0
	Cond.			215	210	185	220	220
	Temp(C)			15.0	15.0	15.0	15.0	15.0
30	pH			7.6	7.7	7.5	7.6	7.6
	O2 ppm			9.6	9.8	9.7	9.3	8.7
	Cond.			225	220	210	230	230
	Temp(C)			15.0	15.0	15.0	15.0	15.0
20	pH			7.6	7.6	7.6	7.7	7.8
	O2 ppm			9.7	9.4	9.2	9.6	8.6
	Cond.			235	235	230	240	240
	Temp(C)			15.0	15.0	15.0	15.0	15.0
10	pH			7.6	7.1	6.9	7.0	7.8
	O2 ppm			9.5	8.1	7.9	3.8	9.7
	Cond.			250	240	235	255	255
	Temp(C)			15.0	15.0	15.0	15.0	15.0
Control	pH			7.7	7.5	7.7	7.8	7.8
	O2 ppm			9.6	9.9	9.8	9.7	9.8
	Cond.			260	245	250	260	265
	Temp(C)			15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900538

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Terminal Settling Basin, (700)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 06/25/90
Received	: 06/27/90
Tested	: 06/28/90 at: 1530
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900538

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.2				7.6
	O2 ppm	9.2				9.2
	Cond.	224				224
	Temp(C)	15.5	15.5	16.0	16.0	16.0
65	pH	7.6				7.7
	O2 ppm	9.2				9.3
	Cond.	338				337
	Temp(C)	15.5	15.5	16.0	16.0	16.0
40	pH	7.7				8.3
	O2 ppm	9.2				9.3
	Cond.	414				414
	Temp(C)	15.5	15.5	16.0	16.0	16.0
20	pH	7.8				8.4
	O2 ppm	9.1				9.3
	Cond.	477				471
	Temp(C)	15.5	15.5	16.0	16.0	16.0
10	pH	7.8				8.4
	O2 ppm	8.9				9.3
	Cond.	507				496
	Temp(C)	15.5	15.5	16.0	16.0	16.0
5	pH	7.8				8.3
	O2 ppm	8.8				9.0
	Cond.	513				514
	Temp(C)	15.5	15.5	16.0	16.0	16.0
Control	pH	7.8				8.4
	O2 ppm	8.9				9.2
	Cond.	532				531
	Temp(C)	15.5	15.5	16.0	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900628

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/25/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900628

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.1				7.6
	O2 ppm	9.4				9.2
	Cond.	267				275
	Temp(C)	15.5	15.5	15.0	14.5	14.5
100	pH	7.1				7.2
	O2 ppm	9.4				8.6
	Cond.	267				268
	Temp(C)	15.5	15.5	15.0	14.5	14.5
Control	pH	7.8				8.2
	O2 ppm	9.4				8.2
	Cond.	542				541
	Temp(C)	15.5	15.5	15.0	14.5	14.5
Control	pH	7.8				8.2
	O2 ppm	9.4				8.1
	Cond.	542				539
	Temp(C)	15.5	15.0	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900426

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Boiler House, (800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 1115

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900426

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.7
	O2 ppm	9.6				8.9
	Cond.	109				117
	Temp(C)	15.0	15.0	15.0	15.5	16.0
65	pH	7.9				8.1
	O2 ppm	9.3				8.9
	Cond.	266				271
	Temp(C)	15.0	15.0	15.0	15.5	16.0
40	pH	7.9				8.2
	O2 ppm	8.9				9.0
	Cond.	374				381
	Temp(C)	15.0	15.0	15.0	15.5	16.0
20	pH	7.9				8.4
	O2 ppm	8.6				9.0
	Cond.	452				458
	Temp(C)	15.0	15.0	15.0	15.5	16.0
10	pH	7.9				8.4
	O2 ppm	8.3				9.1
	Cond.	496				497
	Temp(C)	15.0	15.0	15.0	15.5	16.0
5	pH	7.9				8.3
	O2 ppm	8.4				9.2
	Cond.	516				517
	Temp(C)	15.0	15.0	15.0	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	8.5				9.4
	Cond.	538				541
	Temp(C)	15.0	15.0	15.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900539

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Boiler House, (800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1130

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900539

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.9
	O2 ppm	10.2				9.8
	Cond.	110				117
	Temp(C)	16.0	16.0	16.0	15.5	15.5
65	pH	8.0				8.1
	O2 ppm	10.2				9.5
	Cond.	272				279
	Temp(C)	16.0	16.0	16.0	15.5	15.5
40	pH	8.0				8.0
	O2 ppm	10.2				8.9
	Cond.	386				394
	Temp(C)	16.0	16.0	16.0	15.5	15.5
20	pH	8.0				8.4
	O2 ppm	10.1				9.8
	Cond.	471				474
	Temp(C)	16.0	16.0	16.0	15.5	15.5
10	pH	8.0				8.4
	O2 ppm	10.0				9.8
	Cond.	511				512
	Temp(C)	16.0	16.0	16.0	15.5	15.5
5	pH	8.0				8.3
	O2 ppm	10.1				9.6
	Cond.	537				536
	Temp(C)	16.0	16.0	16.0	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	10.7				9.7
	Cond.	555				556
	Temp(C)	16.0	16.0	16.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900150

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Steel Making CW, (1000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1300

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	1	1	1	10
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900150

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.0
	O2 ppm	10.4				9.4
	Cond.	122				132
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	7.9				8.0
	O2 ppm	9.7				9.0
	Cond.	287				292
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	7.9				8.3
	O2 ppm	9.1				9.3
	Cond.	384				386
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	8.4				8.8
	Cond.	468				463
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	8.4				9.0
	Cond.	503				501
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	8.3				9.4
	Cond.	526				521
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.1				9.1
	Cond.	544				549
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900094

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Steel Making CW, (1000)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	00:30	01:00	18:30	42:00	66:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	1	10
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900094

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	18:30	42:00	66:00	96:00
100	pH	7.3	7.7		7.7	7.5	7.6	7.5
	O2 ppm	8.4	9.3		9.8	9.9	9.8	9.8
	Cond.	95	105		95	95	100	100
	Temp(C)	15.0	15.0		15.0	15.0	15.0	15.0
65	pH		7.8		7.8	7.8	7.7	7.7
	O2 ppm		9.6		9.8	9.8	9.9	9.9
	Cond.		160		160	160	160	160
	Temp(C)		15.0		15.0	15.0	15.0	15.0
40	pH		7.8		7.8	7.9	7.7	7.7
	O2 ppm		9.7		9.6	9.9	9.7	9.8
	Cond.		210		205	200	205	210
	Temp(C)		15.0		15.0	15.0	15.0	15.0
30	pH		7.8		7.6	7.8	7.6	7.7
	O2 ppm		9.8		8.8	9.6	9.3	9.9
	Cond.		225		220	215	220	220
	Temp(C)		15.0		15.0	15.0	15.0	15.0
20	pH		7.8		7.8	7.9	7.8	7.8
	O2 ppm		9.8		9.7	9.8	9.8	9.9
	Cond.		245		235	235	235	240
	Temp(C)		15.0		15.0	15.0	15.0	15.0
10	pH		7.8		7.9	8.0	7.9	7.8
	O2 ppm		9.8		9.7	9.9	9.8	9.9
	Cond.		255		250	250	250	255
	Temp(C)		15.0		15.0	15.0	15.0	15.0
Control	pH		7.8		7.6	7.8	7.6	7.8
	O2 ppm		9.8		8.7	9.6	9.0	9.9
	Cond.		240		265	265	270	270
	Temp(C)		15.0		15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900540

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Steel Making CW, (1000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1140

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900540

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.8
	O2 ppm	9.5				10.0
	Cond.	129				136
	Temp(C)	16.0	15.5	15.5	15.5	15.5
65	pH	7.9				8.1
	O2 ppm	9.5				9.8
	Cond.	281				290
	Temp(C)	16.0	15.5	15.5	15.5	15.5
40	pH	7.9				8.3
	O2 ppm	9.6				10.1
	Cond.	384				387
	Temp(C)	16.0	15.5	15.5	15.5	15.5
20	pH	7.9				8.4
	O2 ppm	9.5				10.1
	Cond.	466				467
	Temp(C)	16.0	15.5	15.5	15.5	15.5
10	pH	7.9				8.5
	O2 ppm	9.5				10.1
	Cond.	503				502
	Temp(C)	16.0	15.5	15.5	15.5	15.5
5	pH	7.9				8.5
	O2 ppm	9.5				10.1
	Cond.	525				524
	Temp(C)	16.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	9.5				10.0
	Cond.	542				542
	Temp(C)	16.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900154

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 20 inch, (1500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1030

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900154

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.6
	O2 ppm	10.4				8.9
	Cond.	115				121
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	7.9				8.1
	O2 ppm	9.4				9.5
	Cond.	278				280
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	7.9				8.2
	O2 ppm	8.9				9.4
	Cond.	380				386
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	7.9				8.2
	O2 ppm	8.7				9.4
	Cond.	459				465
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	7.9				8.3
	O2 ppm	8.5				9.4
	Cond.	514				523
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	7.9				8.2
	O2 ppm	8.5				9.4
	Cond.	525				530
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.1
	O2 ppm	8.2				8.8
	Cond.	543				557
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900093

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 20 inch, (1500)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	00:30	01:00	18:30	42:00	66:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900093

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	18:30	42:00	66:00	96:00
100	pH	7.5	7.8		7.7	7.5	7.5	7.5
	O2 ppm	9.6	9.8		9.8	9.9	9.8	9.8
	Cond.	85	105		90	85	90	90
	Temp(C)	15.0	15.0		15.0	15.0	15.0	15.0
65	pH		7.8		7.9	7.8	7.7	7.7
	O2 ppm		9.7		9.8	9.9	9.9	9.1
	Cond.		170		155	155	155	155
	Temp(C)		15.0		15.0	15.0	15.0	15.0
40	pH		7.8		7.9	7.9	7.8	7.7
	O2 ppm		9.7		9.8	10.0	9.9	9.9
	Cond.		215		200	200	195	200
	Temp(C)		15.0		15.0	15.0	15.0	15.0
30	pH		7.8		7.8	7.9	7.8	7.8
	O2 ppm		9.8		9.5	9.9	9.9	9.9
	Cond.		230		215	215	215	220
	Temp(C)		15.0		15.0	15.0	15.0	15.0
20	pH		7.9		7.9	8.0	7.8	7.8
	O2 ppm		9.8		9.6	9.9	9.9	9.9
	Cond.		245		235	235	235	235
	Temp(C)		15.0		15.0	15.0	15.0	15.0
10	pH		7.8		7.7	8.0	7.8	7.8
	O2 ppm		9.8		8.6	10.0	9.8	10.0
	Cond.		260		250	250	250	255
	Temp(C)		15.0		15.0	15.0	15.0	15.0
Control	pH		7.8		8.0	8.0	7.8	7.8
	O2 ppm		9.7		9.8	9.9	9.8	9.9
	Cond.		260		265	265	270	270
	Temp(C)		15.0		15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900541

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 20 inch, (1500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1145

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900541

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.7
	O2 ppm	9.7				9.4
	Cond.	108				113
	Temp(C)	16.0	15.5	15.5	15.5	16.0
65	pH	7.9				8.1
	O2 ppm	9.6				9.9
	Cond.	272				273
	Temp(C)	16.0	15.5	15.5	15.5	16.0
40	pH	7.9				8.2
	O2 ppm	9.6				9.9
	Cond.	378				380
	Temp(C)	16.0	15.5	15.5	15.5	16.0
20	pH	7.9				8.3
	O2 ppm	9.5				9.9
	Cond.	456				455
	Temp(C)	16.0	15.5	15.5	15.5	16.0
10	pH	7.9				8.4
	O2 ppm	9.4				9.8
	Cond.	501				502
	Temp(C)	16.0	15.5	15.5	15.5	16.0
5	pH	7.9				8.4
	O2 ppm	9.4				9.9
	Cond.	520				519
	Temp(C)	16.0	15.5	15.5	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	9.5				9.6
	Cond.	541				533
	Temp(C)	16.0	15.5	15.5	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900155

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Coke Oven Condenser, (1600)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900155

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.8
	O2 ppm	10.2				9.4
	Cond.	123				132
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	8.0				8.1
	O2 ppm	9.8				9.4
	Cond.	279				292
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	8.0				8.1
	O2 ppm	9.5				9.1
	Cond.	384				394
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	7.9				8.1
	O2 ppm	9.1				9.2
	Cond.	464				477
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	7.9				8.3
	O2 ppm	8.6				9.4
	Cond.	503				510
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	8.0				8.3
	O2 ppm	8.6				9.4
	Cond.	522				535
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.4				9.5
	Cond.	543				552
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900090

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Coke Oven Condenser, (1600)
Laboratory	: MOE
Sampling Method	: Grab
Sampled By	: L. McCormack
Date Collected	: 05/23/90
Received	: 05/25/90
Tested	: 05/25/90 at: 1200
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	24:00	48:00	69:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900090

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	24:00	48:00	69:00	96:00
100	pH	7.8		7.7	7.7	7.6	7.6	7.6
	O2 ppm	9.4		8.9	9.8	9.5	9.3	9.8
	Cond.	95		100	140	125	110	100
	Temp(C)	15.0		15.0	15.0	15.0	15.0	15.0
65	pH			7.7	7.8	7.7	7.6	7.8
	O2 ppm			8.9	9.8	9.5	9.2	9.8
	Cond.			155	210	200	165	155
	Temp(C)			15.0	15.0	15.0	15.0	15.0
40	pH			7.7	7.8	7.6	7.6	7.8
	O2 ppm			8.8	9.7	9.4	9.0	9.9
	Cond.			195	255	250	200	195
	Temp(C)			15.0	15.0	15.0	15.0	15.0
30	pH			7.8	7.8	7.7	7.7	7.8
	O2 ppm			9.0	9.7	9.6	9.2	9.9
	Cond.			215	275	270	215	210
	Temp(C)			15.0	15.0	15.0	15.0	15.0
20	pH			7.8	7.8	7.8	7.8	7.8
	O2 ppm			9.1	9.8	9.5	9.4	9.8
	Cond.			230	315	290	230	230
	Temp(C)			15.0	15.0	15.0	15.0	15.0
10	pH			7.9	7.8	7.8	7.8	7.9
	O2 ppm			9.1	9.7	9.5	9.2	9.9
	Cond.			245	315	315	245	245
	Temp(C)			15.0	15.0	15.0	15.0	15.0
Control	pH			7.9	7.8	7.6	7.6	7.9
	O2 ppm			9.0	9.8	9.7	9.4	9.8
	Cond.			270	330	330	250	260
	Temp(C)			15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900542

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Coke Oven Condenser, (1600)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1150

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900542

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.9
	O2 ppm	9.2				9.9
	Cond.	116				123
	Temp(C)	16.0	15.5	15.5	15.5	15.5
65	pH	8.0				8.2
	O2 ppm	9.0				10.0
	Cond.	276				283
	Temp(C)	16.0	15.5	15.5	15.5	15.5
40	pH	7.9				8.3
	O2 ppm	8.9				10.1
	Cond.	379				387
	Temp(C)	16.0	15.5	15.5	15.5	15.5
20	pH	7.9				8.4
	O2 ppm	8.9				9.9
	Cond.	458				455
	Temp(C)	16.0	15.5	15.5	15.5	15.5
10	pH	7.9				8.4
	O2 ppm	8.9				9.5
	Cond.	502				495
	Temp(C)	16.0	15.5	15.5	15.5	15.5
5	pH	7.9				8.0
	O2 ppm	9.0				8.7
	Cond.	522				525
	Temp(C)	16.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	9.0				9.5
	Cond.	540				537
	Temp(C)	16.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890314

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/27/89
Received : 11/29/89
Tested : 11/30/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	1	1	10
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890314

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.6
	O2 ppm	10.4				8.8
	Cond.	151				165
	Temp(C)	15.0	15.0	14.5	14.5	14.0
65	pH	7.8				7.9
	O2 ppm	9.8				8.7
	Cond.	312				321
	Temp(C)	15.0	15.0	14.5	14.5	14.0
40	pH	7.8				8.1
	O2 ppm	9.7				8.9
	Cond.	404				418
	Temp(C)	15.0	15.0	14.5	14.5	14.0
20	pH	7.8				8.2
	O2 ppm	9.5				8.9
	Cond.	495				500
	Temp(C)	15.0	15.0	14.5	14.5	14.0
10	pH	7.8				8.4
	O2 ppm	9.4				9.2
	Cond.	530				531
	Temp(C)	15.0	15.0	14.5	14.5	14.0
Control	pH	7.8				7.7
	O2 ppm	9.2				9.4
	Cond.	570				558
	Temp(C)	15.0	15.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890363

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: #2 Tube Mill, (1800)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: R. King
Date Collected	: 12/13/89
Received	: 12/15/89
Tested	: 12/18/89 at: 815
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890363

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	10.3				10.7
	Cond.	188				186
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.8				8.3
	O2 ppm	9.8				10.4
	Cond.	323				322
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.8				8.3
	O2 ppm	9.2				10.4
	Cond.	418				418
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.7				8.5
	O2 ppm	8.7				10.5
	Cond.	490				484
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	8.4				10.5
	Cond.	515				515
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.4
	O2 ppm	8.4				10.4
	Cond.	537				520
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.4				10.3
	Cond.	560				563
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900072

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 01/22/90
Received : 01/25/90
Tested : 01/26/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900072

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.8
	O2 ppm	10.2				9.7
	Cond.	166				169
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.9				8.1
	O2 ppm	9.8				9.7
	Cond.	304				310
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.3
	O2 ppm	9.3				10.0
	Cond.	401				405
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.3
	O2 ppm	9.2				9.7
	Cond.	468				472
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.3
	O2 ppm	9.1				9.7
	Cond.	503				507
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.4
	O2 ppm	9.0				9.9
	Cond.	520				526
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.5
	O2 ppm	8.6				10.1
	Cond.	540				537
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900147

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900147

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.0
	O2 ppm	10.1				9.3
	Cond.	114				125
	Temp(C)	14.5	14.5	14.5	14.0	14.0
100	pH	7.9				7.7
	O2 ppm	10.1				9.0
	Cond.	114				119
	Temp(C)	14.5	14.5	14.5	14.0	14.0
Control	pH	7.9				8.1
	O2 ppm	8.3				8.1
	Cond.	543				550
	Temp(C)	14.5	14.5	14.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.3				8.5
	Cond.	543				540
	Temp(C)	14.5	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900249

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/29/90 at: 930

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900249

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.6				7.7
	O2 ppm	11.0				8.8
	Cond.	148				153
	Temp(C)	15.0	14.5	15.0	14.5	14.5
100	pH	7.6				7.6
	O2 ppm	11.0				8.7
	Cond.	148				155
	Temp(C)	15.0	14.5	15.0	14.5	14.5
Control	pH	7.9				8.3
	O2 ppm	9.9				8.5
	Cond.	530				525
	Temp(C)	15.0	14.5	15.0	14.5	14.5
Control	pH	7.9				8.3
	O2 ppm	9.9				9.6
	Cond.	530				526
	Temp(C)	15.0	14.5	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900331

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/25/90 at: 1510

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900331

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.3
	O2 ppm	9.7				7.6
	Cond.	131				131
	Temp(C)	15.0	15.5	15.5	15.5	15.5
100	pH	8.0				7.4
	O2 ppm	9.7				7.6
	Cond.	131				133
	Temp(C)	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.1
	O2 ppm	8.9				8.5
	Cond.	550				539
	Temp(C)	15.0	15.5	15.5	15.5	15.5
Control	pH	7.9				8.2
	O2 ppm	8.9				8.8
	Cond.	550				535
	Temp(C)	15.0	15.5	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900368

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/07/90
Received : 05/09/90
Tested : 05/09/90 at: 1245

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	1	10

96 Hour LC50 Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900368

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.8
	O2 ppm	9.8				8.9
	Cond.	165				178
	Temp(C)	15.0	16.0	15.0	14.0	14.0
100	pH	7.7				7.8
	O2 ppm	9.8				9.3
	Cond.	165				169
	Temp(C)	15.0	16.0	15.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.9				9.2
	Cond.	546				536
	Temp(C)	15.0	16.0	15.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.9				9.2
	Cond.	546				542
	Temp(C)	15.0	16.0	15.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900427

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: #2 Tube Mill, (1800)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 05/28/90
Received	: 05/30/90
Tested	: 05/31/90 at: 1120
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single concentration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900427

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.8
	O2 ppm	9.3				8.7
	Cond.	214				215
	Temp(C)	15.0	15.0	15.0	15.5	16.0
100	pH	7.9				7.8
	O2 ppm	9.3				8.6
	Cond.	214				211
	Temp(C)	15.0	15.0	15.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	8.6				9.0
	Cond.	535				530
	Temp(C)	15.0	15.0	15.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	8.6				9.2
	Cond.	535				531
	Temp(C)	15.0	15.0	15.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900100

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/28/90
Received : 05/31/90
Tested : 06/01/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	02:00	04:00	25:00	49:00	71:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900100

TEST CONC. %		ELAPSED TIME 00:00	02:00	04:00	25:00	49:00	71:00	96:00
100	pH	7.5	7.4	7.6	7.6	7.6	7.6	7.7
	O2 ppm	8.7	9.1	9.5	9.6	9.6	9.6	9.5
	Cond.	135	135	135	140	140	140	150
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0
65	pH		7.7	7.7	7.8	7.8	7.8	7.8
	O2 ppm		9.5	9.5	9.7	9.8	9.6	9.6
	Cond.		185	185	175	190	185	185
	Temp(C)		15.0	15.0	15.0	15.0	15.0	15.0
40	pH		7.7	7.7	7.7	7.7	7.7	7.8
	O2 ppm		9.5	9.4	9.5	9.6	9.5	9.5
	Cond.		215	200	190	220	220	220
	Temp(C)		15.0	15.0	15.0	15.0	15.0	15.0
30	pH		7.6	7.7	7.7	7.7	7.8	7.8
	O2 ppm		9.5	9.5	9.7	9.8	9.8	9.6
	Cond.		225	205	220	230	230	230
	Temp(C)		15.0	15.0	15.0	15.0	15.0	15.0
20	pH		7.7	7.7	7.7	7.7	7.8	7.8
	O2 ppm		9.6	9.5	9.8	9.8	9.8	9.6
	Cond.		235	205	225	240	240	240
	Temp(C)		15.0	15.0	15.0	15.0	15.0	15.0
10	pH		7.7	7.8	7.7	7.7	7.8	7.8
	O2 ppm		9.5	9.4	9.7	9.8	9.3	9.3
	Cond.		245	235	230	250	250	250
	Temp(C)		15.0	15.0	15.0	15.0	15.0	15.0
Control	pH		7.8	7.7	7.8	7.8	7.8	7.8
	O2 ppm		9.5	9.8	9.6	9.7	9.1	9.1
	Cond.		260	255	255	260	265	265
	Temp(C)		15.0	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900543

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/27/90 at: 1030

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900543

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.5
	O2 ppm	9.5				8.0
	Cond.	166				178
	Temp(C)	15.5	15.5	16.0	15.5	15.5
100	pH	7.9				7.5
	O2 ppm	9.5				7.9
	Cond.	166				174
	Temp(C)	15.5	15.5	16.0	15.5	15.5
Control	pH	7.9				8.2
	O2 ppm	9.2				8.3
	Cond.	540				541
	Temp(C)	15.5	15.5	16.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	9.2				8.7
	Cond.	540				545
	Temp(C)	15.5	15.5	16.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900625

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/25/90 at: 1505

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900625

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.6
	O2 ppm	9.6				8.0
	Cond.	210				221
	Temp(C)	15.5	15.0	15.0	14.5	14.5
100	pH	8.0				7.6
	O2 ppm	9.6				8.2
	Cond.	210				218
	Temp(C)	15.5	15.0	15.0	14.5	14.5
Control	pH	7.8				8.3
	O2 ppm	9.4				9.2
	Cond.	539				535
	Temp(C)	15.5	15.0	15.0	14.5	14.5
Control	pH	7.8				8.3
	O2 ppm	9.4				9.1
	Cond.	539				537
	Temp(C)	15.5	15.0	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900096

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 24 inch Coke Quench, (2000)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	00:30	01:00	19:00	42:00	66:00	96:00	%
100	0	0	0	10	10	10	10	100
65	0	0	0	3	5	5	5	50
40	0	0	0	0	0	0	1	10
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	1	10
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : 59.3 %

95% fid. limits : 50.9 - 71.5 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By : Moving Average

TOXICITY TEST PARAMETERS

Sample Number: 01900096

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	19:00	42:00	66:00	96:00
100	pH	8.3	8.3		7.9	7.5	7.2	7.2
	O2 ppm	8.4	8.8		9.7	7.5	6.6	7.6
	Cond.	280	280		280	285	290	285
	Temp(C)	15.0	15.0		15.0	15.0	15.0	15.0
65	pH		8.2		7.9	7.8	7.6	7.7
	O2 ppm		9.1		9.9	9.6	9.2	9.9
	Cond.		275		275	280	280	280
	Temp(C)		15.0		15.0	15.0	15.0	15.0
40	pH		8.1		7.9	7.9	7.8	7.8
	O2 ppm		9.2		9.9	10.0	9.9	10.0
	Cond.		275		275	270	270	275
	Temp(C)		15.0		15.0	15.0	15.0	15.0
30	pH		8.0		7.8	7.9	7.8	7.8
	O2 ppm		9.7		9.8	10.0	9.9	10.0
	Cond.		275		270	270	270	275
	Temp(C)		15.0		15.0	15.0	15.0	15.0
20	pH		7.9		8.0	8.0	7.8	7.8
	O2 ppm		9.7		9.9	10.1	9.9	10.0
	Cond.		275		270	265	270	270
	Temp(C)		15.0		15.0	15.0	15.0	15.0
10	pH		7.9		8.0	8.0	7.9	7.8
	O2 ppm		9.8		10.0	10.0	9.9	10.0
	Cond.		270		270	265	270	270
	Temp(C)		15.0		15.0	15.0	15.0	15.0
Control	pH		7.8		8.0	7.9	7.9	7.8
	O2 ppm		9.8		9.9	9.9	9.8	9.9
	Cond.		255		265	265	265	270
	Temp(C)		15.0		15.0	15.0	15.0	15.0

COMPANY: Algoma Steel, Sault Ste. Marie (40006)
SECTOR: Iron and Steel
REGION: Northeast

SUMMARY

Data for fifty Daphnia magna acute lethality toxicity tests conducted on samples of effluent collected between November 1989 and April 1990 were submitted by Algoma Steel Corp. of Sault Ste. Marie. This company was not in operation during part of July and all of August due to a steel workers strike, therefore no samples were submitted for these months.

Samples from coke oven condenser (1600), cold mill 20 inch sewer (1500), 30 inch sewer (300), the 60 inch sewer (200), and #2 steel making cooling water (1000) and cold mill 24 inch sewer (500) were not acutely lethal to Daphnia, or had 48 h LC50 values > 100%. The audit sample collected in May from the coke oven condenser was acutely lethal to Daphnia (LC50 = 25.5%).

Eight of nine samples collected from the tube mill (400) were all not acutely lethal to Daphnia, as was the Ministry audit. One sample had an LC50 >100%

Six of nine samples of # 2 tube mill (1800) effluent were nonlethal, and two samples had a single mortality during the test. The sample collected in March was toxic to Daphnia with a 48 h LC50 = 27.8%. The Ministry audit sample had an LC50 > 100%.

Seven of nine samples from the terminal settling basin (700) were nonlethal. Two remaining samples had LC50s > 100% as did the Ministry audit.

Six of nine samples from the bar and strip lagoon (100) were acutely lethal to Daphnia, with 48 h LC50s between 16.2 and 90.6 % effluent. One sample was non-lethal and the remaining had LC50s >100%. The Ministry audit conducted in May had an LC50 = 57.4%. to 21.4%.

Bar & Strip Lagoon

03890311 sampled: 11/28/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal.

03890362 sampled: 12/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900073 sampled: 01/22/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900156 sampled: 02/26/90 LC50: 21.4 %
95% fid. limits: 16.2 - 28.0 %
comments:

03900246 sampled: 03/26/90 LC50: 24.8 %
95% fid. limits: 35.8 - 17.1 % slope: 2.9
comments:

03900328 sampled: 04/23/90 LC50: 79.1 %
95% fid. limits: 42.8 - 146.0 % slope: 1.4
comments:

02900099 sampled: 05/28/90 LC50: 57.4 %
95% fid. limits: 44.2 - 73.4 % slope: 5.2
comments: MISA Audit

03900423 sampled: 05/28/90 LC50: 55.1 %
95% fid. limits: 41.9 - 72.3 % slope: 4.2
comments:

03900533 sampled: 06/26/90 LC50: 50.0 - 100.0 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 Range 50 - 100

03900626 sampled: 07/23/90 LC50: 16.2 %
95% fid. limits: 12.1 - 21.6 % slope: 5.4
comments:

60 inch Sewer

03900152 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900089 sampled: 05/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900534 sampled: 06/25/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

30 inch Sewer

03900151 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900535 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Tube Mill

03890312 sampled: 11/27/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890364 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900070 sampled: 01/22/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900149 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900247 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900329 sampled: 04/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900092 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; non-lethal

03900424 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900536 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900627 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Cold Mill 24 inch

03900148 sampled: 02/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

02900097 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900537 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Cold Mill Storm Sewer

Terminal Settling Basin

03890313 sampled: 11/27/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890365 sampled: 12/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900071 sampled: 01/22/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900153 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900248 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900330 sampled: 04/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900098 sampled: 05/28/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900425 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900538 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900628 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Boiler House

03900426 sampled: 05/28/90 LC50: 11.4 %
95% fid. limits: 9.0 - 14.4 % slope: 5.6
comments:

03900539 sampled: 06/25/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Intake Water

#2 Steel Making CW

03900150 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900094 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900540 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

#1 Thickener

#2 Thickener

By-products Area

Cold Mill 20 inch

03900154 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900093 sampled: 05/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900541 sampled: 06/25/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Coke Oven Condenser

03900155 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900090 sampled: 05/23/90 LC50: 25.5 %
95% fid. limits: 18.3 - 34.4 % slope: 4.2
comments: MISA Audit

03900542 sampled: 06/25/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Rain Gauge

#2 Tube Mill

03890314 sampled: 11/27/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100% effluent concentration

03890363 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900072 sampled: 01/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900147 sampled: 02/26/90 LC50: 27.8 %
95% fid. limits: 22.3 - 34.7 % slope: 5.9
comments:

03900249 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900331 sampled: 04/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900368 sampled: 05/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900427 sampled: 05/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900100 sampled: 05/28/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900543 sampled: 06/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900625 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

#1 Thickener EO

24 inch Coke Quench

02900096 sampled: 05/23/90 LC50: 0.0 - 5.0 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890311

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/28/89
Received : 11/29/89
Tested : 11/30/89 at: 1210

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890311

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		7.9
	O2 ppm	10.0		9.1
	Cond.	337		345
	Temp(C)	19.0	19.5	19.5
50	pH	8.1		8.2
	O2 ppm	9.4		9.3
	Cond.	321		330
	Temp(C)	19.0	19.5	19.5
25	pH	8.3		8.3
	O2 ppm	9.1		9.4
	Cond.	313		322
	Temp(C)	19.0	19.5	19.5
13	pH	8.3		8.3
	O2 ppm	9.0		9.4
	Cond.	309		317
	Temp(C)	19.0	19.5	19.5
6	pH	8.4		8.3
	O2 ppm	9.0		9.5
	Cond.	307		308
	Temp(C)	19.0	19.5	19.5
Control	pH	8.4		8.4
	O2 ppm	9.1		9.5
	Cond.	306		310
	Temp(C)	19.0	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890362

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/16/89 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890362

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		8.1
	O2 ppm	10.6		8.4
	Cond.	298		300
	Temp(C)	20.0	19.0	20.0
50	pH	8.2		8.2
	O2 ppm	9.4		8.8
	Cond.	297		298
	Temp(C)	20.0	19.0	20.0
25	pH	8.4		8.3
	O2 ppm	9.1		8.7
	Cond.	297		299
	Temp(C)	20.0	19.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.9		8.9
	Cond.	297		298
	Temp(C)	20.0	19.0	20.0
6	pH	8.4		8.5
	O2 ppm	8.8		9.3
	Cond.	296		298
	Temp(C)	20.0	19.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		9.4
	Cond.	296		305
	Temp(C)	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900073

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 01/22/90
Received : 01/25/90
Tested : 01/25/90 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	2	16
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900073

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.3		8.4
	Cond.	266		268
	Temp(C)	20.0	20.0	20.5
50	pH	8.2		8.3
	O2 ppm	8.9		8.4
	Cond.	286		285
	Temp(C)	20.0	20.0	20.5
25	pH	8.2		8.4
	O2 ppm	8.7		8.4
	Cond.	294		294
	Temp(C)	20.0	20.0	20.5
13	pH	8.2		8.4
	O2 ppm	8.6		8.3
	Cond.	299		298
	Temp(C)	20.0	20.0	20.5
6	pH	8.2		8.4
	O2 ppm	8.5		8.4
	Cond.	302		302
	Temp(C)	20.0	20.0	20.5
Control	pH	8.2		8.3
	O2 ppm	8.5		8.5
	Cond.	299		300
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900156

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Bar & Strip Lagoon, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 02/26/90
Received	: 02/28/90
Tested	: 03/01/90 at: 1000
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	11	12	100
50	0	5	8	66
25	0	0	11	91
13	0	0	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 21.4 %

95% fid. limits : 16.2 - 28.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Trimmed Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 03900156

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.5		8.3
	O2 ppm	9.1		8.5
	Cond.	281		282
	Temp(C)	20.0	20.0	20.5
50	pH	8.5		8.4
	O2 ppm	8.9		8.5
	Cond.	294		290
	Temp(C)	20.0	20.0	20.5
25	pH	8.5		8.5
	O2 ppm	8.9		8.4
	Cond.	300		294
	Temp(C)	20.0	20.0	20.5
13	pH	8.5		8.4
	O2 ppm	8.8		8.4
	Cond.	303		299
	Temp(C)	20.0	20.0	20.5
6	pH	8.5		8.4
	O2 ppm	8.8		8.6
	Cond.	302		302
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.4
	O2 ppm	8.8		8.4
	Cond.	300		303
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900246

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/28/90 at: 1440

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	10	11	91
50	0	3	10	83
25	0	3	8	66
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 24.8 %

95% fid. limits : 35.8 - 17.1 %

Comments :

SLOPE of Mortality Curve : 2.9
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900246

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	9.2		8.4
	O2 ppm	9.2		8.9
	Cond.	284		297
	Temp(C)	19.5	19.5	20.0
50	pH	8.7		8.3
	O2 ppm	9.0		8.8
	Cond.	293		303
	Temp(C)	19.5	19.5	20.0
25	pH	8.3		8.3
	O2 ppm	8.9		8.8
	Cond.	297		304
	Temp(C)	19.5	19.5	20.0
13	pH	8.2		8.2
	O2 ppm	8.8		8.8
	Cond.	299		306
	Temp(C)	19.5	19.5	20.0
6	pH	8.1		8.2
	O2 ppm	8.8		8.8
	Cond.	296		311
	Temp(C)	19.5	19.5	20.0
Control	pH	8.1		8.1
	O2 ppm	8.9		8.7
	Cond.	301		305
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900328

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/25/90 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	5	7	58
50	0	0	4	33
25	0	0	3	25
13	0	0	2	16
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 79.1 %

95% fid. limits : 42.8 - 146.0 %

Comments :

SLOPE of Mortality Curve : 1.4
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900328

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.9		8.3
	O2 ppm	9.3		9.2
	Cond.	252		252
	Temp(C)	20.0	20.0	20.0
50	pH	8.4		8.3
	O2 ppm	9.3		9.2
	Cond.	278		274
	Temp(C)	20.0	20.0	20.0
25	pH	8.1		8.2
	O2 ppm	9.3		9.2
	Cond.	290		286
	Temp(C)	20.0	20.0	20.0
13	pH	8.1		8.2
	O2 ppm	9.2		9.1
	Cond.	295		291
	Temp(C)	20.0	20.0	20.0
6	pH	8.0		8.2
	O2 ppm	9.2		9.2
	Cond.	301		294
	Temp(C)	20.0	20.0	20.0
Control	pH	7.9		8.2
	O2 ppm	9.2		9.1
	Cond.	300		294
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900099

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/28/90
Received : 05/31/90
Tested : 05/31/90 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	%
100	0	0	0	0	3	11	91
60	0	0	0	0	0	6	50
30	0	0	0	0	0	1	8
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 57.4 %

95% fid. limits : 44.2 - 73.4 %

Comments : MISA Audit

SLOPE of Mortality Curve : 5.2
LC50 Calculated By : Probit Analysis

TOXICITY TEST PARAMETERS

Sample Number: 02900099

TEST CONC.		ELAPSED TIME	
%		00:00	00:30 01:00 02:00 24:00 48:00
100	pH	9.0	7.8
	O2 ppm	8.9	9.1
	Cond.	250	255
	Temp(C)	20.0	20.0
60	pH	8.7	8.0
	O2 ppm	8.8	9.1
	Cond.	275	275
	Temp(C)	20.0	20.0
30	pH	8.4	8.0
	O2 ppm	8.7	8.9
	Cond.	295	255
	Temp(C)	20.0	20.0
15	pH	8.1	7.9
	O2 ppm	8.7	8.9
	Cond.	305	280
	Temp(C)	20.0	20.0
5	pH	8.0	7.8
	O2 ppm	8.7	8.9
	Cond.	305	270
	Temp(C)	20.0	20.0
Control	pH	7.8	7.8
	O2 ppm	8.7	8.9
	Cond.	275	300
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900423

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 1140

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	6	10	83
50	0	2	6	50
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 55.1 %

95% fid. limits : 41.9 - 72.3 %

Comments :

SLOPE of Mortality Curve : 4.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900423

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	9.2		8.4
	O2 ppm	9.1		8.2
	Cond.	272		280
	Temp(C)	20.5	20.5	20.5
50	pH	8.7		8.4
	O2 ppm	9.1		8.1
	Cond.	282		288
	Temp(C)	20.5	20.5	20.5
25	pH	8.5		8.3
	O2 ppm	9.1		8.2
	Cond.	288		292
	Temp(C)	20.5	20.5	20.5
13	pH	8.4		8.3
	O2 ppm	9.1		8.3
	Cond.	292		293
	Temp(C)	20.5	20.5	20.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.3
	Cond.	294		296
	Temp(C)	20.5	20.5	20.5
Control	pH	8.3		8.4
	O2 ppm	8.9		8.3
	Cond.	296		296
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900533

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/26/90
Received : 06/27/90
Tested : 06/28/90 at: 1440

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	8	66
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 50.0 - 100.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 Range 50 - 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900533

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.6		7.8
	O2 ppm	8.9		8.8
	Cond.	210		211
	Temp(C)	20.5	20.5	20.5
50	pH	7.9		8.1
	O2 ppm	9.0		8.8
	Cond.	254		257
	Temp(C)	20.5	20.5	20.5
25	pH	8.0		8.2
	O2 ppm	9.0		8.8
	Cond.	276		279
	Temp(C)	20.5	20.5	20.5
13	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	286		289
	Temp(C)	20.5	20.5	20.5
6	pH	8.1		8.2
	O2 ppm	9.0		9.0
	Cond.	292		293
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.3
	O2 ppm	9.0		8.7
	Cond.	299		300
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900626

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Bar & Strip Lagoon, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/25/90 at: 1535

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	5	12	100
50	0	3	12	100
25	0	4	12	100
13	0	0	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 16.2 %

95% fid. limits : 12.1 - 21.6 %

Comments :

SLOPE of Mortality Curve : 5.4
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900626

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	9.0		8.3
	O2 ppm	9.0		8.5
	Cond.	290		298
	Temp(C)	21.0	21.0	21.0
50	pH	8.6		8.3
	O2 ppm	9.0		8.5
	Cond.	295		300
	Temp(C)	21.0	21.0	21.0
25	pH	8.4		8.3
	O2 ppm	9.0		8.5
	Cond.	301		301
	Temp(C)	21.0	21.0	21.0
13	pH	8.3		8.2
	O2 ppm	9.0		8.5
	Cond.	303		302
	Temp(C)	21.0	21.0	21.0
6	pH	8.1		8.1
	O2 ppm	9.0		8.4
	Cond.	302		302
	Temp(C)	21.0	21.0	21.0
Control	pH	8.2		8.2
	O2 ppm	9.1		8.3
	Cond.	300		303
	Temp(C)	21.0	21.0	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900152

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 60 inch Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1535

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900152

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	9.4		8.4
	Cond.	115		117
	Temp(C)	20.5	20.0	20.0
50	pH	8.5		8.2
	O2 ppm	9.0		8.2
	Cond.	221		214
	Temp(C)	20.5	20.0	20.0
25	pH	8.5		8.3
	O2 ppm	8.7		8.3
	Cond.	260		260
	Temp(C)	20.5	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	8.7		8.3
	Cond.	279		283
	Temp(C)	20.5	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.6		8.3
	Cond.	294		293
	Temp(C)	20.5	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		8.1
	Cond.	303		311
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900089

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 60 inch Sewer, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/25/90
Tested : 05/25/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	1	1	8
60	0	0	0	0	0	0	0
30	0	0	0	0	2	2	16
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900089

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.7	7.7
	O2 ppm	9.3	8.5
	Cond.	110	125
	Temp(C)	20.0	20.0
60	pH	7.8	7.7
	O2 ppm	9.1	8.5
	Cond.	205	225
	Temp(C)	20.0	20.0
30	pH	7.8	7.7
	O2 ppm	9.1	8.5
	Cond.	265	290
	Temp(C)	20.0	20.0
15	pH	[illegible]	7.8
	O2 ppm	8.9	8.5
	Cond.	300	330
	Temp(C)	20.0	20.0
5	pH	7.8	7.8
	O2 ppm	8.9	8.5
	Cond.	320	350
	Temp(C)	20.0	20.0
Control	pH	7.8	7.6
	O2 ppm	8.9	8.9
	Cond.	310	365
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900534

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 60 inch Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900534

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		7.9
	O2 ppm	9.1		9.0
	Cond.	108		112
	Temp(C)	20.5	20.5	20.5
50	pH	8.1		8.1
	O2 ppm	9.1		8.9
	Cond.	204		209
	Temp(C)	20.5	20.5	20.5
25	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	250		255
	Temp(C)	20.5	20.5	20.5
13	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	273		276
	Temp(C)	20.5	20.5	20.5
6	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	286		289
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	299		298
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900151

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 30 inch Sewer, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1525

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900151

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		7.9
	O2 ppm	9.3		8.2
	Cond.	133		135
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.0		8.1
	Cond.	224		225
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	9.0		8.1
	Cond.	264		263
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	8.9		8.0
	Cond.	283		283
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	8.8		7.8
	Cond.	292		293
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		8.1
	Cond.	303		311
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900535

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 30 inch Sewer, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1520

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900535

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	9.0		8.9
	Cond.	143		149
	Temp(C)	20.5	20.5	20.5
50	pH	8.0		8.1
	O2 ppm	9.0		9.0
	Cond.	221		226
	Temp(C)	20.5	20.5	20.5
25	pH	8.0		8.2
	O2 ppm	9.0		9.0
	Cond.	259		264
	Temp(C)	20.5	20.5	20.5
13	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	276		280
	Temp(C)	20.5	20.5	20.5
6	pH	8.0		8.2
	O2 ppm	9.1		9.0
	Cond.	288		290
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.3
	O2 ppm	9.0		8.9
	Cond.	299		300
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890312

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/27/89
Received : 11/29/89
Tested : 11/30/89 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890312

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.7		7.9
	O2 ppm	10.0		8.8
	Cond.	189		197
	Temp(C)	19.0	19.5	19.5
50	pH	8.5		8.2
	O2 ppm	9.5		9.0
	Cond.	251		258
	Temp(C)	19.0	19.5	19.5
25	pH	8.4		8.3
	O2 ppm	9.2		9.0
	Cond.	280		286
	Temp(C)	19.0	19.5	19.5
13	pH	8.4		8.3
	O2 ppm	9.2		9.1
	Cond.	295		300
	Temp(C)	19.0	19.5	19.5
6	pH	8.4		8.3
	O2 ppm	9.3		9.0
	Cond.	301		304
	Temp(C)	19.0	19.5	19.5
Control	pH	8.4		8.4
	O2 ppm	9.1		9.4
	Cond.	306		309
	Temp(C)	19.0	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890364

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/16/89 at: 1240

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890364

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.3		8.0
	O2 ppm	10.9		8.8
	Cond.	222		223
	Temp(C)	20.0	19.0	19.0
50	pH	8.4		8.2
	O2 ppm	9.3		9.0
	Cond.	259		261
	Temp(C)	20.0	19.0	19.0
25	pH	8.5		8.3
	O2 ppm	9.1		9.1
	Cond.	278		280
	Temp(C)	20.0	19.0	19.0
13	pH	8.5		8.4
	O2 ppm	8.9		9.1
	Cond.	287		288
	Temp(C)	20.0	19.0	19.0
6	pH	8.4		8.3
	O2 ppm	8.9		9.1
	Cond.	289		294
	Temp(C)	20.0	19.0	19.0
Control	pH	8.5		8.4
	O2 ppm	8.7		9.1
	Cond.	297		300
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900070

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Tube Mill, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 01/22/90
Received	: 01/25/90
Tested	: 01/25/90 at: 1500
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. ONE, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	1	1	8
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900070

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.9		7.8
	O2 ppm	9.1		8.1
	Cond.	131		135
	Temp(C)	20.0	20.0	20.5
50	pH	8.1		8.2
	O2 ppm	8.9		8.3
	Cond.	218		222
	Temp(C)	20.0	20.0	20.5
25	pH	8.1		8.3
	O2 ppm	8.7		8.4
	Cond.	262		263
	Temp(C)	20.0	20.0	20.5
13	pH	8.2		8.4
	O2 ppm	8.6		8.4
	Cond.	284		283
	Temp(C)	20.0	20.0	20.5
6	pH	8.2		8.4
	O2 ppm	8.7		8.4
	Cond.	294		296
	Temp(C)	20.0	20.0	20.5
Control	pH	8.2		8.4
	O2 ppm	8.5		8.4
	Cond.	299		299
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900149

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900149

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.3		8.1
	Cond.	131		134
	Temp(C)	20.0	20.0	20.0
50	pH	8.4		8.2
	O2 ppm	9.1		8.1
	Cond.	221		223
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	8.8		8.1
	Cond.	265		266
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	8.8		8.0
	Cond.	285		285
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.4
	O2 ppm	8.8		7.8
	Cond.	300		296
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		7.9
	Cond.	303		311
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900247

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Tube Mill, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 03/26/90
Received	: 03/28/90
Tested	: 03/28/90 at: 1450
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900247

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.4		8.1
	O2 ppm	9.4		8.9
	Cond.	146		157
	Temp(C)	19.5	19.5	20.0
50	pH	8.1		8.1
	O2 ppm	9.4		8.8
	Cond.	225		219
	Temp(C)	19.5	19.5	20.0
25	pH	8.1		8.2
	O2 ppm	9.1		8.6
	Cond.	262		267
	Temp(C)	19.5	19.5	20.0
13	pH	8.1		8.2
	O2 ppm	9.1		8.7
	Cond.	280		284
	Temp(C)	19.5	19.5	20.0
6	pH	8.1		8.2
	O2 ppm	9.1		8.7
	Cond.	289		300
	Temp(C)	19.5	19.5	20.0
Control	pH	8.1		8.2
	O2 ppm	8.9		8.8
	Cond.	301		304
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900329

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/26/90 at: 1120

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900329

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		7.9
	O2 ppm	9.0		8.6
	Cond.	138		141
	Temp(C)	20.0	20.0	19.5
50	pH	8.4		8.1
	O2 ppm	9.0		8.7
	Cond.	220		220
	Temp(C)	20.0	20.0	19.5
25	pH	8.5		8.2
	O2 ppm	8.9		8.7
	Cond.	261		259
	Temp(C)	20.0	20.0	19.5
13	pH	8.5		8.3
	O2 ppm	8.8		8.6
	Cond.	281		278
	Temp(C)	20.0	20.0	19.5
6	pH	8.5		8.3
	O2 ppm	8.9		8.7
	Cond.	294		288
	Temp(C)	20.0	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	8.7		8.5
	Cond.	298		300
	Temp(C)	20.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900092

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900092

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.7	7.8
	O2 ppm	8.5	8.6
	Cond.	160	165
	Temp(C)	20.0	20.0
60	pH	7.8	7.8
	O2 ppm	8.8	8.7
	Cond.	230	235
	Temp(C)	20.0	20.0
30	pH	7.8	7.9
	O2 ppm	8.9	8.7
	Cond.	270	275
	Temp(C)	20.0	20.0
15	pH	7.8	7.8
	O2 ppm	8.9	8.7
	Cond.	290	300
	Temp(C)	20.0	20.0
5	pH	7.8	7.6
	O2 ppm	8.9	8.7
	Cond.	305	315
	Temp(C)	20.0	20.0
Control	pH	7.8	7.7
	O2 ppm	9.2	8.7
	Cond.	290	295
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900424

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900424

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		7.9
	O2 ppm	9.1		8.5
	Cond.	167		166
	Temp(C)	20.5	20.5	20.5
50	pH	8.2		8.2
	O2 ppm	9.1		8.4
	Cond.	229		232
	Temp(C)	20.5	20.5	20.5
25	pH	8.3		8.3
	O2 ppm	9.0		8.3
	Cond.	262		265
	Temp(C)	20.5	20.5	20.5
13	pH	8.3		8.3
	O2 ppm	9.0		8.3
	Cond.	278		280
	Temp(C)	20.5	20.5	20.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.3
	Cond.	289		290
	Temp(C)	20.5	20.5	20.5
Control	pH	8.3		8.3
	O2 ppm	8.9		8.3
	Cond.	296		296
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900536

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900536

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		7.8
	O2 ppm	9.0		8.7
	Cond.	134		141
	Temp(C)	20.5	20.5	20.5
50	pH	7.9		8.1
	O2 ppm	9.0		8.9
	Cond.	215		222
	Temp(C)	20.5	20.5	20.5
25	pH	8.0		8.2
	O2 ppm	9.0		9.0
	Cond.	254		262
	Temp(C)	20.5	20.5	20.5
13	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	273		279
	Temp(C)	20.5	20.5	20.5
6	pH	8.1		8.2
	O2 ppm	9.0		9.0
	Cond.	288		291
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.3
	O2 ppm	9.0		8.9
	Cond.	299		302
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900627

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Tube Mill, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/25/90 at: 1605

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	2	16
50	0	0	2	16
25	0	2	2	16
13	0	1	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900627

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		7.9
	O2 ppm	9.1		8.4
	Cond.	126		128
	Temp(C)	21.0	21.0	21.0
50	pH	8.1		8.1
	O2 ppm	9.0		8.5
	Cond.	215		217
	Temp(C)	21.0	21.0	21.0
25	pH	8.1		8.2
	O2 ppm	9.0		8.5
	Cond.	260		261
	Temp(C)	21.0	21.0	21.0
13	pH	8.1		8.2
	O2 ppm	9.0		8.4
	Cond.	280		282
	Temp(C)	21.0	21.0	21.0
6	pH	8.1		8.2
	O2 ppm	9.0		8.5
	Cond.	292		294
	Temp(C)	21.0	21.0	21.0
Control	pH	8.2		8.2
	O2 ppm	9.1		8.2
	Cond.	300		302
	Temp(C)	21.0	21.0	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900148

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 24 inch, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1450

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	1	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900148

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	9.3		8.1
	Cond.	112		115
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.0		8.0
	Cond.	212		214
	Temp(C)	20.0	20.0	20.0
25	pH	8.5		8.3
	O2 ppm	8.9		8.0
	Cond.	261		262
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.9		7.9
	Cond.	284		284
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.2
	O2 ppm	8.9		8.0
	Cond.	292		296
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		7.7
	Cond.	303		311
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900097

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 24 inch, (500)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900097

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	7.7					7.7
	O2 ppm	9.0					8.6
	Cond.	110					135
	Temp(C)	20.0					20.0
60	pH	7.8					7.8
	O2 ppm	9.0					8.6
	Cond.	200					205
	Temp(C)	20.0					20.0
30	pH	7.8					7.7
	O2 ppm	8.9					8.6
	Cond.	260					265
	Temp(C)	20.0					20.0
15	pH	7.9					7.8
	O2 ppm	8.9					8.6
	Cond.	285					295
	Temp(C)	20.0					20.0
5	pH	7.9					7.7
	O2 ppm	8.9					8.6
	Cond.	300					310
	Temp(C)	20.0					20.0
Control	pH	7.8					7.6
	O2 ppm	8.9					8.6
	Cond.	275					300
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900537

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 24 inch, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1535

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900537

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		7.8
	O2 ppm	9.1		8.8
	Cond.	106		114
	Temp(C)	20.5	20.5	20.5
50	pH	8.0		8.1
	O2 ppm	9.1		8.9
	Cond.	199		207
	Temp(C)	20.5	20.5	20.5
25	pH	8.1		8.2
	O2 ppm	9.1		9.0
	Cond.	246		253
	Temp(C)	20.5	20.5	20.5
13	pH	8.1		8.2
	O2 ppm	9.0		9.0
	Cond.	269		276
	Temp(C)	20.5	20.5	20.5
6	pH	8.1		8.2
	O2 ppm	9.0		8.9
	Cond.	284		288
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.3
	O2 ppm	9.0		8.9
	Cond.	299		300
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890313

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 11/27/89
Received : 11/29/89
Tested : 11/30/89 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890313

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.6		7.6
	O2 ppm	9.9		8.5
	Cond.	202		205
	Temp(C)	19.0	19.5	19.5
50	pH	8.1		8.1
	O2 ppm	9.4		8.9
	Cond.	255		261
	Temp(C)	19.0	19.5	19.5
25	pH	8.3		8.2
	O2 ppm	9.2		9.0
	Cond.	282		288
	Temp(C)	19.0	19.5	19.5
13	pH	8.3		8.3
	O2 ppm	9.2		9.0
	Cond.	295		300
	Temp(C)	19.0	19.5	19.5
6	pH	8.3		8.3
	O2 ppm	9.3		9.1
	Cond.	303		302
	Temp(C)	19.0	19.5	19.5
Control	pH	8.4		8.4
	O2 ppm	9.1		9.3
	Cond.	306		308
	Temp(C)	19.0	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890365

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/16/89 at: 1240

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890365

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.5		7.8
	O2 ppm	10.3		7.8
	Cond.	172		178
	Temp(C)	20.0	19.0	19.0
50	pH	8.5		8.2
	O2 ppm	9.4		8.6
	Cond.	234		240
	Temp(C)	20.0	19.0	19.0
25	pH	8.5		8.3
	O2 ppm	9.1		8.8
	Cond.	264		268
	Temp(C)	20.0	19.0	19.0
13	pH	8.5		8.3
	O2 ppm	9.0		8.9
	Cond.	280		282
	Temp(C)	20.0	19.0	19.0
6	pH	8.5		8.3
	O2 ppm	9.0		9.0
	Cond.	286		289
	Temp(C)	20.0	19.0	19.0
Control	pH	8.5		8.4
	O2 ppm	8.7		9.0
	Cond.	297		299
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900071

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 01/22/90
Received : 01/25/90
Tested : 01/25/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900071

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		7.8
	O2 ppm	9.1		8.1
	Cond.	198		198
	Temp(C)	20.0	20.0	20.5
50	pH	8.0		8.2
	O2 ppm	8.9		8.3
	Cond.	251		251
	Temp(C)	20.0	20.0	20.5
25	pH	8.1		8.3
	O2 ppm	8.7		8.3
	Cond.	277		276
	Temp(C)	20.0	20.0	20.5
13	pH	8.2		8.3
	O2 ppm	8.6		8.4
	Cond.	290		289
	Temp(C)	20.0	20.0	20.5
6	pH	8.1		8.4
	O2 ppm	8.6		8.4
	Cond.	296		298
	Temp(C)	20.0	20.0	20.5
Control	pH	8.2		8.4
	O2 ppm	8.5		8.4
	Cond.	299		296
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900153

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Terminal Settling Basin, (700)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 02/26/90
Received	: 02/28/90
Tested	: 02/28/90 at: 1550
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. ONE, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900153

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		7.7
	O2 ppm	9.4		7.8
	Cond.	200		201
	Temp(C)	20.5	20.0	20.0
50	pH	8.3		8.1
	O2 ppm	9.3		8.0
	Cond.	251		255
	Temp(C)	20.5	20.0	20.0
25	pH	8.4		8.2
	O2 ppm	9.0		8.1
	Cond.	291		279
	Temp(C)	20.5	20.0	20.0
13	pH	8.4		8.3
	O2 ppm	9.0		8.2
	Cond.	290		292
	Temp(C)	20.5	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	8.9		8.1
	Cond.	296		297
	Temp(C)	20.5	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		8.1
	Cond.	303		311
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900248

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/28/90 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900248

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		7.9
	O2 ppm	9.7		8.0
	Cond.	190		194
	Temp(C)	19.5	19.5	20.0
50	pH	8.0		8.0
	O2 ppm	9.5		8.5
	Cond.	244		249
	Temp(C)	19.5	19.5	20.0
25	pH	8.1		8.1
	O2 ppm	9.2		8.7
	Cond.	272		275
	Temp(C)	19.5	19.5	20.0
13	pH	8.1		8.2
	O2 ppm	9.1		8.7
	Cond.	286		291
	Temp(C)	19.5	19.5	20.0
6	pH	8.0		8.2
	O2 ppm	9.2		8.9
	Cond.	290		299
	Temp(C)	19.5	19.5	20.0
Control	pH	8.1		8.3
	O2 ppm	8.9		9.0
	Cond.	301		309
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900330

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/26/90 at: 1125

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC, %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900330

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.5		7.5
	O2 ppm	9.2		8.2
	Cond.	228		227
	Temp(C)	20.0	20.0	19.5
50	pH	8.1		7.9
	O2 ppm	9.1		8.5
	Cond.	263		261
	Temp(C)	20.0	20.0	19.5
25	pH	8.3		8.2
	O2 ppm	9.1		8.7
	Cond.	281		279
	Temp(C)	20.0	20.0	19.5
13	pH	8.4		8.2
	O2 ppm	9.1		8.7
	Cond.	291		288
	Temp(C)	20.0	20.0	19.5
6	pH	8.3		8.3
	O2 ppm	9.2		8.7
	Cond.	298		291
	Temp(C)	20.0	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	8.7		8.4
	Cond.	298		301
	Temp(C)	20.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900098

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/28/90
Received : 05/31/90
Tested : 05/31/90 at: 1300

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	%
100	0	0	0	0	0	1	8
60	0	0	0	0	0	1	8
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900098

TEST CONC.		ELAPSED TIME					
%		00:00	00:30	01:00	02:00	24:00	48:00
100	pH	6.8					7.2
	O2 ppm	8.0					8.8
	Cond.	185					200
	Temp(C)	20.0					20.0
60	pH	7.3					7.1
	O2 ppm	8.5					8.8
	Cond.	240					245
	Temp(C)	20.0					20.0
30	pH	7.6					7.5
	O2 ppm	8.6					8.9
	Cond.	275					275
	Temp(C)	20.0					20.0
15	pH	7.7					7.6
	O2 ppm	8.7					8.9
	Cond.	295					295
	Temp(C)	20.0					20.0
5	pH	7.8					7.7
	O2 ppm	8.7					8.9
	Cond.	300					305
	Temp(C)	20.0					20.0
Control	pH	7.3					7.8
	O2 ppm	8.9					8.8
	Cond.	255					315
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900425

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 1135

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900425

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.5		7.6
	O2 ppm	9.0		8.4
	Cond.	274		273
	Temp(C)	20.5	20.5	20.5
50	pH	8.0		8.0
	O2 ppm	9.1		8.5
	Cond.	284		284
	Temp(C)	20.5	20.5	20.5
25	pH	8.2		8.2
	O2 ppm	9.0		8.5
	Cond.	289		290
	Temp(C)	20.5	20.5	20.5
13	pH	8.3		8.2
	O2 ppm	9.0		8.5
	Cond.	293		294
	Temp(C)	20.5	20.5	20.5
6	pH	8.3		8.2
	O2 ppm	9.0		8.5
	Cond.	294		295
	Temp(C)	20.5	20.5	20.5
Control	pH	8.3		8.3
	O2 ppm	8.9		8.5
	Cond.	296		296
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900538

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1550

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900538

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.2		7.6
	O2 ppm	8.9		8.7
	Cond.	216		222
	Temp(C)	20.5	20.5	20.5
50	pH	7.7		8.0
	O2 ppm	9.0		8.8
	Cond.	255		261
	Temp(C)	20.5	20.5	20.5
25	pH	7.9		8.1
	O2 ppm	9.0		8.9
	Cond.	276		281
	Temp(C)	20.5	20.5	20.5
13	pH	8.0		8.2
	O2 ppm	9.0		8.9
	Cond.	285		290
	Temp(C)	20.5	20.5	20.5
6	pH	8.1		8.3
	O2 ppm	9.1		8.9
	Cond.	290		295
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.3
	O2 ppm	9.0		8.9
	Cond.	299		300
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900628

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Terminal Settling Basin, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/26/90 at: 940

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900628

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.2		7.3
	O2 ppm	9.1		8.3
	Cond.	263		260
	Temp(C)	21.0	20.5	19.5
50	pH	7.8		7.9
	O2 ppm	9.1		8.8
	Cond.	280		279
	Temp(C)	21.0	20.5	19.5
25	pH	8.1		8.2
	O2 ppm	9.0		9.1
	Cond.	289		289
	Temp(C)	21.0	20.5	19.5
13	pH	8.2		8.3
	O2 ppm	9.0		9.0
	Cond.	295		294
	Temp(C)	21.0	20.5	19.5
6	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	296		296
	Temp(C)	21.0	20.5	19.5
Control	pH	8.3		8.4
	O2 ppm	9.0		8.9
	Cond.	300		299
	Temp(C)	21.0	20.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900426

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Boiler House, (800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 1415

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	12	12	100
25	0	11	12	100
13	0	2	8	66
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 11.4 %

95% fid. limits : 9.0 - 14.4 %

Comments :

SLOPE of Mortality Curve : 5.6
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900426

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0	7.8	
	O2 ppm	9.1	8.9	
	Cond.	113	112	
	Temp(C)	20.5	20.5	
50	pH	8.2	8.1	
	O2 ppm	9.1	8.6	
	Cond.	207	212	
	Temp(C)	20.5	20.5	
25	pH	8.2		8.2
	O2 ppm	9.1		8.5
	Cond.	251		257
	Temp(C)	20.5	20.5	20.5
13	pH	8.2		8.3
	O2 ppm	9.0		8.6
	Cond.	270		282
	Temp(C)	20.5	20.5	20.5
6	pH	8.2		8.3
	O2 ppm	9.0		8.5
	Cond.	284		293
	Temp(C)	20.5	20.5	20.5
Control	pH	8.3		8.3
	O2 ppm	8.9		8.4
	Cond.	296		301
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900539

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Boiler House, (800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	2	2	16
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900539

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.1		8.9
	Cond.	105		109
	Temp(C)	20.0	20.5	20.5
50	pH	8.4		8.3
	O2 ppm	9.0		8.9
	Cond.	200		206
	Temp(C)	20.0	20.5	20.5
25	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	246		256
	Temp(C)	20.0	20.5	20.5
13	pH	8.5		8.4
	O2 ppm	8.9		8.9
	Cond.	266		274
	Temp(C)	20.0	20.5	20.5
6	pH	8.5		8.4
	O2 ppm	8.9		8.9
	Cond.	281		286
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.5
	O2 ppm	8.9		8.8
	Cond.	294		299
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900150

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Steel Making CW, (1000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900150

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	9.3		8.3
	Cond.	120		124
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.0		8.2
	Cond.	216		218
	Temp(C)	20.0	20.0	20.0
25	pH	8.5		8.3
	O2 ppm	9.0		8.2
	Cond.	261		262
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	8.8		8.1
	Cond.	284		283
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	8.8		8.1
	Cond.	293		296
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		8.0
	Cond.	303		311
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900094

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Steel Making CW, (1000)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900094

TEST CONC.		ELAPSED TIME	
%		00:00 01:00 02:00 04:00 24:00 48:00	
100	pH	7.6	7.7
	O2 ppm	8.6	8.6
	Cond.	120	135
	Temp(C)	20.0	20.0
60	pH	7.7	7.8
	O2 ppm	8.8	8.7
	Cond.	210	220
	Temp(C)	20.0	20.0
30	pH	7.7	7.8
	O2 ppm	8.9	8.7
	Cond.	260	275
	Temp(C)	20.0	20.0
15	pH	7.6	7.8
	O2 ppm	9.0	8.7
	Cond.	290	305
	Temp(C)	20.0	20.0
5	pH	7.7	7.7
	O2 ppm	9.0	8.7
	Cond.	305	310
	Temp(C)	20.0	20.0
Control	pH	7.7	7.6
	O2 ppm	8.9	8.7
	Cond.	295	295
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900540

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Steel Making CW, (1000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1155

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY
%				%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900540

TEST CONC.		ELAPSED TIME 00:00	24:00	48:00
%				
100	pH	7.9		8.0
	O2 ppm	9.0		9.0
	Cond.	122		129
	Temp(C)	20.0	20.5	20.5
50	pH	8.3		8.2
	O2 ppm	9.0		9.0
	Cond.	207		215
	Temp(C)	20.0	20.5	20.5
25	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	248		256
	Temp(C)	20.0	20.5	20.5
13	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	269		275
	Temp(C)	20.0	20.5	20.5
6	pH	8.5		8.4
	O2 ppm	8.9		9.0
	Cond.	282		285
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.6
	O2 ppm	8.9		8.4
	Cond.	294		297
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900154

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 20 inch, (1500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900154

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	9.7		8.1
	Cond.	112		116
	Temp(C)	20.5	20.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.3		8.0
	Cond.	212		215
	Temp(C)	20.5	20.0	20.0
25	pH	8.5		8.3
	O2 ppm	9.2		8.0
	Cond.	260		261
	Temp(C)	20.5	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	9.1		8.1
	Cond.	279		283
	Temp(C)	20.5	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	9.0		8.2
	Cond.	294		296
	Temp(C)	20.5	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.8		8.1
	Cond.	303		310
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900093

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 20 inch, (1500)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900093

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.6	7.7
	O2 ppm	9.5	8.7
	Cond.	110	135
	Temp(C)	20.0	20.0
60	pH	7.7	7.7
	O2 ppm	9.1	8.7
	Cond.	205	215
	Temp(C)	20.0	20.0
30	pH	7.8	7.8
	O2 ppm	9.0	8.8
	Cond.	260	270
	Temp(C)	20.0	20.0
15	pH	7.8	7.8
	O2 ppm	8.9	8.7
	Cond.	285	300
	Temp(C)	20.0	20.0
5	pH	7.8	7.7
	O2 ppm	8.9	8.7
	Cond.	300	315
	Temp(C)	20.0	20.0
Control	pH	7.3	7.6
	O2 ppm	8.9	8.6
	Cond.	300	280
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900541

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Cold Mill 20 inch, (1500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/29/90 at: 1210

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	1	8
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900541

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	9.1		9.1
	Cond.	103		110
	Temp(C)	20.0	20.5	20.5
50	pH	8.3		8.2
	O2 ppm	9.0		9.1
	Cond.	197		205
	Temp(C)	20.0	20.5	20.5
25	pH	8.4		8.3
	O2 ppm	9.0		9.1
	Cond.	242		249
	Temp(C)	20.0	20.5	20.5
13	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	264		271
	Temp(C)	20.0	20.5	20.5
6	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	278		284
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.5
	O2 ppm	8.9		8.7
	Cond.	294		296
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900155

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Coke Oven Condenser, (1600)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 950

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	24:00	48:00	72:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900155

TEST CONC.		ELAPSED TIME		
%		24:00	48:00	72:00
100	pH	7.9		8.1
	O2 ppm	9.1		8.7
	Cond.	125		125
	Temp(C)	20.0	20.0	20.5
50	pH	8.3		8.3
	O2 ppm	9.0		8.6
	Cond.	218		217
	Temp(C)	20.0	20.0	20.5
25	pH	8.5		8.4
	O2 ppm	8.9		8.6
	Cond.	263		259
	Temp(C)	20.0	20.0	20.5
13	pH	8.5		8.4
	O2 ppm	8.9		8.6
	Cond.	282		285
	Temp(C)	20.0	20.0	20.5
6	pH	8.5		8.5
	O2 ppm	8.8		8.1
	Cond.	292		297
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		8.4
	Cond.	300		305
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900090

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : Coke Oven Condenser, (1600)

Laboratory : MOE
Sampling Method : grab
Sampled By : L. McCormack
Date Collected : 05/23/90
Received : 05/25/90
Tested : 05/25/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	6	12	100
60	0	0	0	0	0	12	100
30	0	0	0	0	0	6	50
15	0	0	0	0	0	3	25
5	0	0	0	0	0	1	8
Control	0	0	0	0	0	1	8

48 Hour LC50 : 25.5 %

95% fid. limits : 18.3 - 34.4 %

Comments : MISA Audit

SLOPE of Mortality Curve : 4.2
LC50 Calculated By : Probit Analysis

TOXICITY TEST PARAMETERS

Sample Number: 02900090

TEST CONC. %		ELAPSED TIME 00:00	24:00 48:00
100	pH	7.8	7.7
	O2 ppm	9.2	8.6
	Cond.	130	135
	Temp(C)	20.0	20.0
60	pH	7.9	7.8
	O2 ppm	9.0	8.6
	Cond.	215	225
	Temp(C)	20.0	20.0
30	pH	7.9	7.9
	O2 ppm	9.0	8.6
	Cond.	270	300
	Temp(C)	20.0	20.0
15	pH	8.0	7.9
	O2 ppm	8.9	8.6
	Cond.	300	325
	Temp(C)	20.0	20.0
5	pH	7.9	7.9
	O2 ppm	8.9	8.6
	Cond.	320	355
	Temp(C)	20.0	20.0
Control	pH	7.8	7.8
	O2 ppm	8.8	8.6
	Cond.	290	355
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900542

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: Coke Oven Condenser, (1600)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 06/25/90
Received	: 06/27/90
Tested	: 06/29/90 at: 1215
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	2	16
25	0	0	0	0
13	0	0	0	0
6	0	0	2	16
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900542

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	9.0		9.0
	Cond.	110		116
	Temp(C)	20.0	20.5	20.5
50	pH	8.3		8.3
	O2 ppm	8.9		9.1
	Cond.	201		208
	Temp(C)	20.0	20.5	20.5
25	pH	8.4		8.4
	O2 ppm	8.9		9.1
	Cond.	245		252
	Temp(C)	20.0	20.5	20.5
13	pH	8.4		8.4
	O2 ppm	8.9		9.1
	Cond.	265		272
	Temp(C)	20.0	20.5	20.5
6	pH	8.4		8.4
	O2 ppm	8.9		9.1
	Cond.	279		284
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.4
	O2 ppm	8.9		8.7
	Cond.	294		297
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890314

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: #2 Tube Mill, (1800)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 11/27/89
Received	: 11/29/89
Tested	: 11/30/89 at: 1115
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100% effluent concentration

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890314

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.6		7.5
	O2 ppm	10.0		8.2
	Cond.	148		150
	Temp(C)	19.0	19.5	19.5
50	pH	8.1		8.0
	O2 ppm	9.4		8.5
	Cond.	232		230
	Temp(C)	19.0	19.5	19.5
25	pH	8.3		8.2
	O2 ppm	9.2		8.7
	Cond.	270		269
	Temp(C)	19.0	19.5	19.5
13	pH	8.3		8.3
	O2 ppm	9.2		8.8
	Cond.	288		287
	Temp(C)	19.0	19.5	19.5
6	pH	8.4		8.3
	O2 ppm	9.3		9.0
	Cond.	300		301
	Temp(C)	19.0	19.5	19.5
Control	pH	8.4		8.4
	O2 ppm	9.1		9.2
	Cond.	306		307
	Temp(C)	19.0	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890363

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. King
Date Collected : 12/13/89
Received : 12/15/89
Tested : 12/16/89 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890363

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	10.7		8.8
	Cond.	178		180
	Temp(C)	20.0	19.0	19.0
50	pH	8.3		8.2
	O2 ppm	9.4		8.9
	Cond.	238		239
	Temp(C)	20.0	19.0	19.0
25	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	267		268
	Temp(C)	20.0	19.0	19.0
13	pH	8.4		8.4
	O2 ppm	8.8		9.0
	Cond.	281		282
	Temp(C)	20.0	19.0	19.0
6	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	288		289
	Temp(C)	20.0	19.0	19.0
Control	pH	8.5		8.4
	O2 ppm	8.7		9.2
	Cond.	297		301
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900072

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 01/22/90
Received : 01/25/90
Tested : 01/25/90 at: 1520

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900072

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		7.9
	O2 ppm	9.2		8.0
	Cond.	166		168
	Temp(C)	20.0	20.0	20.5
50	pH	8.1		8.2
	O2 ppm	8.9		8.1
	Cond.	236		236
	Temp(C)	20.0	20.0	20.5
25	pH	8.1		8.3
	O2 ppm	8.7		8.2
	Cond.	270		269
	Temp(C)	20.0	20.0	20.5
13	pH	8.1		8.3
	O2 ppm	8.6		8.2
	Cond.	286		285
	Temp(C)	20.0	20.0	20.5
6	pH	8.2		8.4
	O2 ppm	8.5		8.3
	Cond.	293		295
	Temp(C)	20.0	20.0	20.5
Control	pH	8.2		8.4
	O2 ppm	8.5		8.4
	Cond.	299		299
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900147

TEST CONDITIONS

Company	: Algoma Steel Sault Ste. Marie, ONT (40006)
Region	: Northeast
Industry	: Iron and Steel
Control point	: #2 Tube Mill, (1800)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: B. Murray
Date Collected	: 02/26/90
Received	: 02/28/90
Tested	: 02/28/90 at: 1440
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	11	12	100
25	0	0	4	33
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 27.8 %

95% fid. limits : 22.3 - 34.7 %

Comments :

SLOPE of Mortality Curve : 5.9
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900147

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.9	7.8	
	O2 ppm	9.2	9.2	
	Cond.	116	117	
	Temp(C)	20.0	20.0	
50	pH	8.3		8.2
	O2 ppm	8.9		8.0
	Cond.	214		221
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	8.9		8.0
	Cond.	261		266
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.9		8.0
	Cond.	284		289
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	8.8		8.0
	Cond.	299		299
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.8		7.3
	Cond.	303		313
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900249

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/28/90 at: 1540

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900249

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		7.6
	O2 ppm	8.8		7.8
	Cond.	129		138
	Temp(C)	19.5	19.5	20.0
50	pH	7.9		7.9
	O2 ppm	8.8		8.1
	Cond.	218		222
	Temp(C)	19.5	19.5	20.0
25	pH	8.0		8.0
	O2 ppm	8.8		8.3
	Cond.	259		260
	Temp(C)	19.5	19.5	20.0
13	pH	8.0		8.1
	O2 ppm	8.6		8.5
	Cond.	282		284
	Temp(C)	19.5	19.5	20.0
6	pH	8.1		8.2
	O2 ppm	8.6		8.7
	Cond.	294		295
	Temp(C)	19.5	19.5	20.0
Control	pH	8.1		8.2
	O2 ppm	8.9		8.9
	Cond.	301		306
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900331

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 04/23/90
Received : 04/25/90
Tested : 04/26/90 at: 1135

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900331

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.7
	O2 ppm	9.2		8.6
	Cond.	133		128
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.1
	O2 ppm	9.1		8.7
	Cond.	218		214
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.2
	O2 ppm	9.1		8.7
	Cond.	261		256
	Temp(C)	20.0	20.0	20.0
13	pH	8.4		8.3
	O2 ppm	9.1		8.7
	Cond.	282		275
	Temp(C)	20.0	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	295		287
	Temp(C)	20.0	20.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.7		8.5
	Cond.	298		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900368

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/07/90
Received : 05/09/90
Tested : 05/09/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900368

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		7.9
	O2 ppm	8.8		8.7
	Cond.	161		165
	Temp(C)	19.0	19.5	19.5
50	pH	8.0		8.2
	O2 ppm	8.7		8.8
	Cond.	230		234
	Temp(C)	19.0	19.5	19.5
25	pH	8.1		8.3
	O2 ppm	8.8		8.8
	Cond.	262		269
	Temp(C)	19.0	19.5	19.5
13	pH	8.1		8.3
	O2 ppm	8.7		8.9
	Cond.	282		286
	Temp(C)	19.0	19.5	19.5
6	pH	8.2		8.3
	O2 ppm	8.7		8.8
	Cond.	292		298
	Temp(C)	19.0	19.5	19.5
Control	pH	8.3		8.3
	O2 ppm	8.9		8.8
	Cond.	299		306
	Temp(C)	19.0	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900427

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 05/28/90
Received : 05/30/90
Tested : 05/31/90 at: 1435

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900427

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		7.9
	O2 ppm	9.1		8.2
	Cond.	209		215
	Temp(C)	20.5	20.5	20.5
50	pH	8.1		8.1
	O2 ppm	9.1		8.3
	Cond.	253		260
	Temp(C)	20.5	20.5	20.5
25	pH	8.2		8.2
	O2 ppm	9.1		8.4
	Cond.	273		281
	Temp(C)	20.5	20.5	20.5
13	pH	8.2		8.2
	O2 ppm	9.1		8.4
	Cond.	283		292
	Temp(C)	20.5	20.5	20.5
6	pH	8.2		8.3
	O2 ppm	9.0		8.4
	Cond.	287		298
	Temp(C)	20.5	20.5	20.5
Control	pH	8.3		8.3
	O2 ppm	8.9		8.4
	Cond.	296		299
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900100

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/28/90
Received : 05/31/90
Tested : 05/31/90 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	1	8
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	1	8
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900100

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.7	7.4
	O2 ppm	8.5	8.7
	Cond.	175	180
	Temp(C)	20.0	20.0
60	pH	7.8	7.3
	O2 ppm	8.7	8.7
	Cond.	230	205
	Temp(C)	20.0	20.0
30	pH	7.9	7.7
	O2 ppm	8.7	8.8
	Cond.	270	230
	Temp(C)	20.0	20.0
15	pH	8.0	7.8
	O2 ppm	8.7	8.8
	Cond.	295	255
	Temp(C)	20.0	20.0
5	pH	8.0	7.9
	O2 ppm	8.8	8.8
	Cond.	305	275
	Temp(C)	20.0	20.0
Control	pH	8.0	7.9
	O2 ppm	8.7	8.9
	Cond.	305	290
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900543

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 06/25/90
Received : 06/27/90
Tested : 06/28/90 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900543

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		7.8
	O2 ppm	9.1		8.5
	Cond.	160		168
	Temp(C)	20.5	20.0	20.5
50	pH	8.2		8.1
	O2 ppm	9.0		8.7
	Cond.	227		234
	Temp(C)	20.5	20.0	20.5
25	pH	8.3		8.2
	O2 ppm	8.9		8.8
	Cond.	259		265
	Temp(C)	20.5	20.0	20.5
13	pH	8.3		8.3
	O2 ppm	8.9		8.8
	Cond.	274		279
	Temp(C)	20.5	20.0	20.5
6	pH	8.4		8.3
	O2 ppm	8.9		8.8
	Cond.	284		288
	Temp(C)	20.5	20.0	20.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.5
	Cond.	293		297
	Temp(C)	20.5	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900625

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : #2 Tube Mill, (1800)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Murray
Date Collected : 07/23/90
Received : 07/25/90
Tested : 07/25/90 at: 1440

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	3	25
50	0	1	2	16
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900625

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		7.9
	O2 ppm	9.1		8.3
	Cond.	204		207
	Temp(C)	21.0	21.0	21.0
50	pH	8.1		8.1
	O2 ppm	9.0		8.4
	Cond.	260		256
	Temp(C)	21.0	21.0	21.0
25	pH	8.1		8.1
	O2 ppm	9.0		8.6
	Cond.	278		280
	Temp(C)	21.0	21.0	21.0
13	pH	8.2		8.2
	O2 ppm	9.0		8.7
	Cond.	291		291
	Temp(C)	21.0	21.0	21.0
6	pH	8.2		8.2
	O2 ppm	9.1		8.8
	Cond.	298		302
	Temp(C)	21.0	21.0	21.0
Control	pH	8.2		8.3
	O2 ppm	9.1		8.2
	Cond.	300		302
	Temp(C)	21.0	21.0	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900096

TEST CONDITIONS

Company : Algoma Steel
Sault Ste. Marie, ONT
(40006)
Region : Northeast
Industry : Iron and Steel

Control point : 24 inch Coke Quench, (2000)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 05/23/90
Received : 05/28/90
Tested : 05/28/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	12	100
60	0	0	0	0	0	12	100
30	0	0	0	0	0	12	100
15	0	0	0	0	0	12	100
5	0	0	0	0	0	12	100
Control	0	0	0	0	0	0	0

48 Hour LC50 : 0.0 - 5.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900096

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	8.2					7.8
	O2 ppm	6.0					7.4
	Cond.	330					345
	Temp(C)	20.0					20.0
60	pH	8.1					7.8
	O2 ppm	8.0					8.1
	Cond.	325					335
	Temp(C)	20.0					20.0
30	pH	8.1					7.9
	O2 ppm	8.6					8.7
	Cond.	320					335
	Temp(C)	20.0					20.0
15	pH	8.0					7.9
	O2 ppm	8.8					8.7
	Cond.	315					335
	Temp(C)	20.0					20.0
5	pH	7.9					7.7
	O2 ppm	8.9					8.8
	Cond.	310					325
	Temp(C)	20.0					20.0
Control	pH	7.8					7.6
	O2 ppm	8.9					8.8
	Cond.	285					305
	Temp(C)	20.0					20.0

COMPANY: Atlas Specialty Steel, Welland (1610005)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY
The data for 24 acute lethality trout bioassays conducted on samples collected from the 42" sewer and Intake between November 1989 and October 1990 were submitted by Atlas Specialty Steel.
Ten of the twelve samples collected from the 42" sewer were determined to have been nonlethal to trout. The other two samples produced 96 h LC50s >100 %. An audit sample collected in January 1990 was not lethal to test fish. All twelve intake water samples were determined to have been not lethal to test fish.

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42 inch Sewer

03890290 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890380 sampled: 12/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900003 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

03900068 sampled: 01/24/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900159 sampled: 02/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900251 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

03900332 sampled: 04/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900420 sampled: 05/30/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: single concentration test; 5% mort. @ 100%

03900531 sampled: 06/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concetration test; non lethal

03900645 sampled: 07/31/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900741 sampled: 08/29/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration test; non-lethal

03900845 sampled: 09/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Conc. Test; 5% mort.@ 100% eff. conc.

03900927 sampled: 10/24/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

Waste Acid Plant

North Plant Treatment

CEVAM

Waste Disposal Site

South Water Reclaim

Waste Well

McMaster Sewer Overflow

North Water Reclaim 42

#3 Building

Scale Pit

Rain Gauge

Intake Water

03890291 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890381 sampled: 12/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900069 sampled: 01/24/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900158 sampled: 02/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900252 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

03900333 sampled: 04/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900421 sampled: 05/30/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non lethal

03900532 sampled: 06/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900646 sampled: 07/31/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900740 sampled: 08/29/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900846 sampled: 09/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900928 sampled: 10/24/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

Compressors Reclaim

MISA Trout

TOXICITY TEST REPORT Sample: 03890290

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/23/89 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890290

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.7
	O2 ppm	9.2					9.7
	Cond.	560					559
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
10	pH	7.9					8.6
	O2 ppm	8.8					9.9
	Cond.	556					541
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
20	pH	7.9					8.5
	O2 ppm	8.7					9.8
	Cond.	543					517
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
40	pH	7.9					8.4
	O2 ppm	8.6					9.8
	Cond.	534					516
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
65	pH	7.9					8.2
	O2 ppm	8.9					9.3
	Cond.	510					506
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
100	pH	7.9					8.0
	O2 ppm	8.9					9.3
	Cond.	480					479
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890380

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 12/20/89
Received : 12/20/89
Tested : 12/21/89 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890380

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.2
	O2 ppm	11.1				9.6
	Cond.	345				349
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.9				8.4
	O2 ppm	10.5				9.2
	Cond.	418				420
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.4
	O2 ppm	10.1				8.5
	Cond.	469				470
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	9.7				9.2
	Cond.	510				507
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	9.4				9.1
	Cond.	531				504
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	9.5				8.3
	Cond.	550				508
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	9.1				8.7
	Cond.	570				547
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900003

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : Mark Smithson
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/19/90 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME									TOTAL MORTALITY
%	00:00	01:10	01:00	02:00	04:00	22:10	44:00	74:10	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900003

TEST CONC. %		ELAPSED TIME 00:00	01:10	01:00	02:00	04:00	22:10	44:00	74:10	96:0
100	pH	7.0		7.4		7.7	7.2	7.6	7.	
	O2 ppm	9.7		9.7		8.2	8.4	10.3	9.	
	Cond.	390		400		375	365	390	39	
	Temp(C)	15.0		15.0		15.0	15.0	14.0	14.	
65	pH			7.4		7.9	7.7	7.6	7.	
	O2 ppm			9.7		9.8	10.4	10.3	9.	
	Cond.			350		340	320	350	35	
	Temp(C)			15.0		15.0	15.0	14.0	14.	
40	pH			7.4		8.4	7.6	7.5	7.	
	O2 ppm			9.7		9.8	10.2	10.1	9.	
	Cond.			320		325	280	320	32	
	Temp(C)			15.0		15.0	15.0	14.0	14.	
30	pH			7.4		7.9	7.5	7.3	7.	
	O2 ppm			9.5		9.8	9.9	9.8	9.	
	Cond.			300		290	285	300	30	
	Temp(C)			15.0		15.0	15.0	14.0	14.	
20	pH			7.2		7.7	7.4	7.4	7.	
	O2 ppm			9.5		9.7	10.1	10.1	9.	
	Cond.			290		275	275	290	29	
	Temp(C)			15.0		15.0	15.0	14.0	14.	
10	pH			7.2		7.8	7.5	7.4	7.	
	O2 ppm			9.7		10.0	10.2	10.1	9.	
	Cond.			275		240	265	275	28	
	Temp(C)			15.0		15.0	15.0	14.0	14.	
Control	pH			7.1		7.9	7.4	7.2	7.	
	O2 ppm			9.8		10.0	10.4	10.2	9.	
	Cond.			245		260	240	255	25	
	Temp(C)			15.0		15.0	15.0	14.0	14.	

MISA Trout

TOXICITY TEST REPORT Sample: 03900068

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 01/24/90
Received : 01/24/90
Tested : 01/25/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900068

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.6				10.1
	Cond.	468				472
	Temp(C)	15.0	14.5	14.5	14.5	15.0
65	pH	8.0				8.2
	O2 ppm	9.5				10.0
	Cond.	490				594
	Temp(C)	15.0	14.5	14.5	14.5	15.0
40	pH	8.0				8.3
	O2 ppm	9.4				10.0
	Cond.	508				513
	Temp(C)	15.0	14.5	14.5	14.5	15.0
20	pH	8.0				8.5
	O2 ppm	9.0				10.1
	Cond.	524				519
	Temp(C)	15.0	14.5	14.5	14.5	15.0
10	pH	7.9				8.4
	O2 ppm	8.9				10.2
	Cond.	533				507
	Temp(C)	15.0	14.5	14.5	14.5	15.0
5	pH	7.9				8.4
	O2 ppm	8.8				10.1
	Cond.	538				522
	Temp(C)	15.0	14.5	14.5	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	8.4				10.0
	Cond.	541				535
	Temp(C)	15.0	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900159

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 02/28/90
Received : 02/28/90
Tested : 03/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900159

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.5				7.9
	O2 ppm	9.2				9.4
	Cond.	324				441
	Temp(C)	15.0	14.5	14.5	14.0	14.0
100	pH	7.5				7.9
	O2 ppm	9.2				9.4
	Cond.	324				447
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				9.6
	Cond.	544				551
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.2				9.3
	Cond.	544				556
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900251

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 03/28/90
Received : 03/28/90
Tested : 03/29/90 at: 1535

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900251

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.2
	O2 ppm	9.8				9.5
	Cond.	351				355
	Temp(C)	15.0	15.0	15.0	14.5	15.0
100	pH	8.0				8.1
	O2 ppm	9.8				9.5
	Cond.	351				351
	Temp(C)	15.0	15.0	15.0	14.5	15.0
Control	pH	7.8				8.5
	O2 ppm	9.2				9.9
	Cond.	533				534
	Temp(C)	15.0	15.0	15.0	14.5	15.0
Control	pH	7.8				8.5
	O2 ppm	9.2				9.8
	Cond.	533				532
	Temp(C)	15.0	15.0	15.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900332

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 04/25/90
Received : 04/25/90
Tested : 04/26/90 at: 1005

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900332

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	8.8				9.2
	Cond.	477				487
	Temp(C)	15.5	15.0	16.0	15.5	15.5
100	pH	8.1				8.0
	O2 ppm	8.8				9.3
	Cond.	477				487
	Temp(C)	15.5	15.0	16.0	15.5	15.5
Control	pH	8.0				8.5
	O2 ppm	9.0				9.5
	Cond.	564				537
	Temp(C)	15.5	15.0	16.0	15.5	15.5
Control	pH	8.0				8.5
	O2 ppm	9.0				9.6
	Cond.	564				546
	Temp(C)	15.5	15.0	16.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900420

TEST CONDITIONS

Company	: Atlas Specialty Steel Welland, ONT (1610005)
Region	: West Central
Industry	: Iron and Steel
Control point	: 42 inch Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: E. Vale
Date Collected	: 05/30/90
Received	: 05/30/90
Tested	: 05/31/90 at: 940
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	1	1	10
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: >100%
95% fid. limits	: 0.0 - 0.0 %
Comments	: single concentration test; 5% mort. @ 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900420

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				7.9
	O2 ppm	8.8				8.6
	Cond.	419				425
	Temp(C)	15.0	15.5	15.0	15.5	16.0
100	pH	8.2				7.9
	O2 ppm	8.8				8.7
	Cond.	419				423
	Temp(C)	15.0	15.5	15.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	8.9				9.1
	Cond.	542				539
	Temp(C)	15.0	15.5	15.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	8.9				9.0
	Cond.	542				539
	Temp(C)	15.0	15.5	15.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900531

TEST CONDITIONS

Company	: Atlas Specialty Steel Welland, ONT (1610005)
Region	: West Central
Industry	: Iron and Steel
Control point	: 42 inch Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: E. Vale
Date Collected	: 06/27/90
Received	: 06/27/90
Tested	: 06/28/90 at: 1045
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single concetration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900531

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.0
	O2 ppm	8.6				9.1
	Cond.	325				335
	Temp(C)	16.0	15.5	15.5	15.5	16.0
100	pH	8.2				7.9
	O2 ppm	8.6				8.5
	Cond.	325				332
	Temp(C)	16.0	15.5	15.5	15.5	16.0
Control	pH	8.0				8.4
	O2 ppm	9.3				9.2
	Cond.	546				535
	Temp(C)	16.0	15.5	15.5	15.5	16.0
Control	pH	8.0				8.4
	O2 ppm	9.3				8.8
	Cond.	546				539
	Temp(C)	16.0	15.5	15.5	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900645

TEST CONDITIONS

Company	: Atlas Specialty Steel Welland, ONT (1610005)
Region	: West Central
Industry	: Iron and Steel
Control point	: 42 inch Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: E. Vale
Date Collected	: 07/31/90
Received	: 07/31/90
Tested	: 08/01/90 at: 1050
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900645

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.1
	O2 ppm	8.9				9.6
	Cond.	319				327
	Temp(C)	15.5	15.5	15.0	15.5	15.5
100	pH	8.2				8.0
	O2 ppm	8.9				9.5
	Cond.	319				325
	Temp(C)	15.5	15.5	15.0	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	8.3				9.6
	Cond.	534				537
	Temp(C)	15.5	15.5	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.3				9.4
	Cond.	534				541
	Temp(C)	15.5	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900741

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 08/29/90
Received : 08/29/90
Tested : 08/29/90 at: 1635

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900741

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.9
	O2 ppm	8.2				9.3
	Cond.	311				311
	Temp(C)	15.0	15.5	15.0	15.0	15.0
100	pH	8.1				7.9
	O2 ppm	8.2				9.3
	Cond.	311				310
	Temp(C)	15.0	15.5	15.0	15.0	15.0
Control	pH	7.8				7.8
	O2 ppm	7.6				9.0
	Cond.	539				332
	Temp(C)	15.0	15.5	15.0	15.0	15.0
Control	pH	7.8				7.8
	O2 ppm	7.6				9.0
	Cond.	539				331
	Temp(C)	15.0	15.5	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900845

TEST CONDITIONS

Company	: Atlas Specialty Steel Welland, ONT (1610005)
Region	: West Central
Industry	: Iron and Steel
Control point	: 42 inch Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: E. Vale
Date Collected	: 09/26/90
Received	: 09/26/90
Tested	: 09/26/90 at: 1530
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	1	16
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: >100%
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single Conc. Test; 5% mort.@ 100% eff. conc.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900845

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.9
	O2 ppm	8.6				9.5
	Cond.	312				319
	Temp(C)	15.0	15.5	15.0	15.5	15.5
100	pH	8.1				8.0
	O2 ppm	8.6				9.7
	Cond.	312				321
	Temp(C)	15.0	15.5	15.0	15.5	15.5
Control	pH	8.0				8.5
	O2 ppm	8.8				9.8
	Cond.	536				504
	Temp(C)	15.0	15.5	15.0	15.5	15.5
Control	pH	8.0				8.5
	O2 ppm	8.8				9.8
	Cond.	536				504
	Temp(C)	15.0	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900927

TEST CONDITIONS

Company	: Atlas Specialty Steel Welland, ONT (1610005)
Region	: West Central
Industry	: Iron and Steel
Control point	: 42 inch Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: E. Vale
Date Collected	: 10/24/90
Received	: 10/24/90
Tested	: 10/25/90 at: 1005
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900927

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				7.9
	O2 ppm	8.9				9.0
	Cond.	354				357
	Temp(C)	15.5	15.0	14.0	14.0	15.0
100	pH	8.2				8.0
	O2 ppm	8.9				9.3
	Cond.	354				358
	Temp(C)	15.5	15.0	14.0	14.0	15.0
Control	pH	7.9				8.3
	O2 ppm	8.5				9.2
	Cond.	536				536
	Temp(C)	15.5	15.0	14.0	14.0	15.0
Control	pH	7.9				8.5
	O2 ppm	8.5				8.4
	Cond.	536				534
	Temp(C)	15.5	15.0	14.0	14.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890291

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/23/89 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	1	10
20	0	0	0	0	0	0	0
40	0	0	0	0	0	1	10
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890291

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.6
	O2 ppm	9.3					9.6
	Cond.	561					568
	Temp(C)	14.5	14.5	14.5	14.5	14.5	15.0
10	pH	7.9					8.6
	O2 ppm	8.9					9.7
	Cond.	538					537
	Temp(C)	14.5	14.5	14.5	14.5	14.5	15.0
20	pH	8.0					8.5
	O2 ppm	9.2					9.6
	Cond.	515					518
	Temp(C)	14.5	14.5	14.5	14.5	14.5	15.0
40	pH	8.0					8.6
	O2 ppm	9.3					9.7
	Cond.	472					475
	Temp(C)	14.5	14.5	14.5	14.5	14.5	15.0
65	pH	8.0					8.4
	O2 ppm	9.5					9.7
	Cond.	414					420
	Temp(C)	14.5	14.5	14.5	14.5	14.5	15.0
100	pH	8.1					8.3
	O2 ppm	9.6					9.6
	Cond.	335					340
	Temp(C)	14.5	14.5	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890381

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 12/20/89
Received : 12/20/89
Tested : 12/21/89 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890381

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.3
	O2 ppm	11.1				9.1
	Cond.	319				326
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	8.0				8.4
	O2 ppm	10.6				8.8
	Cond.	401				410
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.5
	O2 ppm	9.9				9.0
	Cond.	457				463
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.9				8.5
	O2 ppm	9.7				9.2
	Cond.	505				506
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	9.6				9.3
	Cond.	523				507
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.9				8.3
	O2 ppm	9.4				9.3
	Cond.	532				517
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.4
	O2 ppm	9.1				8.7
	Cond.	570				537
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900069

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 01/24/90
Received : 01/24/90
Tested : 01/25/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	1	10
40	0	0	0	0	1	10
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	1	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900069

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.0				9.9
	Cond.	329				330
	Temp(C)	15.0	14.5	14.5	14.5	15.0
65	pH	8.0				8.2
	O2 ppm	9.5				9.8
	Cond.	406				404
	Temp(C)	15.0	14.5	14.5	14.5	15.0
40	pH	7.9				8.3
	O2 ppm	9.1				9.9
	Cond.	455				456
	Temp(C)	15.0	14.5	14.5	14.5	15.0
20	pH	7.9				8.2
	O2 ppm	9.0				9.3
	Cond.	497				500
	Temp(C)	15.0	14.5	14.5	14.5	
10	pH	7.9				8.4
	O2 ppm	8.8				9.8
	Cond.	517				515
	Temp(C)	15.0	14.5	14.5	14.5	15.0
5	pH	7.9				8.4
	O2 ppm	8.8				10.1
	Cond.	528				523
	Temp(C)	15.0	14.5	14.5	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	8.6				10.1
	Cond.	540				530
	Temp(C)	15.0	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900158

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 02/28/90
Received : 02/28/90
Tested : 03/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900158

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.8
	O2 ppm	10.2				9.3
	Cond.	331				345
	Temp(C)	15.0	14.5	14.5	14.0	14.0
100	pH	8.1				8.0
	O2 ppm	10.2				9.6
	Cond.	331				344
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.1				9.6
	Cond.	544				560
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.1				9.6
	Cond.	544				549
	Temp(C)	15.0	14.5	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900252

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 03/28/90
Received : 03/28/90
Tested : 03/29/90 at: 940

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900252

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	11.0				9.4
	Cond.	327				351
	Temp(C)	15.0	14.5	15.0	14.5	14.5
100	pH	8.1				8.1
	O2 ppm	11.0				9.3
	Cond.	327				341
	Temp(C)	15.0	14.5	15.0	14.5	14.5
Control	pH	7.9				8.5
	O2 ppm	9.9				8.6
	Cond.	539				537
	Temp(C)	15.0	14.5	15.0	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.9				8.7
	Cond.	539				543
	Temp(C)	15.0	14.5	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900333

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 04/25/90
Received : 04/25/90
Tested : 04/26/90 at: 1010

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900333

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.2
	O2 ppm	9.6				9.4
	Cond.	344				355
	Temp(C)	15.5	15.0	16.0	15.5	15.5
100	pH	8.3				7.9
	O2 ppm	9.6				9.0
	Cond.	344				354
	Temp(C)	15.5	15.0	16.0	15.5	15.5
Control	pH	8.0				8.3
	O2 ppm	9.1				9.5
	Cond.	563				542
	Temp(C)	15.5	15.0	16.0	15.5	15.5
Control	pH	8.0				8.3
	O2 ppm	9.1				9.3
	Cond.	563				551
	Temp(C)	15.5	15.0	16.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900421

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 05/30/90
Received : 05/30/90
Tested : 05/30/90 at: 1425

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900421

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.3
	O2 ppm	9.6				8.2
	Cond.	319				328
	Temp(C)	15.0	15.0	15.0	15.5	15.5
100	pH	8.2				8.0
	O2 ppm	9.6				8.2
	Cond.	319				326
	Temp(C)	15.0	15.0	15.0	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	8.7				8.3
	Cond.	545				539
	Temp(C)	15.0	15.0	15.0	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	8.7				8.2
	Cond.	545				541
	Temp(C)	15.0	15.0	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900532

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 06/27/90
Received : 06/27/90
Tested : 06/28/90 at: 1050

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900532

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.4
	O2 ppm	9.0				9.6
	Cond.	311				317
	Temp(C)	16.0	15.5	16.0	16.0	16.0
100	pH	8.2				8.4
	O2 ppm	9.0				9.6
	Cond.	311				318
	Temp(C)	16.0	15.5	16.0	16.0	16.0
Control	pH	8.0				8.3
	O2 ppm	9.3				8.4
	Cond.	541				538
	Temp(C)	16.0	15.5	16.0	16.0	16.0
Control	pH	8.0				8.2
	O2 ppm	9.3				8.4
	Cond.	541				535
	Temp(C)	16.0	15.5	16.0	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900646

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 07/31/90
Received : 07/31/90
Tested : 08/01/90 at: 1115

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900646

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.3
	O2 ppm	9.0				9.8
	Cond.	311				317
	Temp(C)	15.5	15.5	15.0	15.5	15.5
100	pH	8.3				8.1
	O2 ppm	9.0				9.7
	Cond.	311				317
	Temp(C)	15.5	15.5	15.0	15.5	15.5
Control	pH	7.8				8.4
	O2 ppm	8.3				9.5
	Cond.	536				537
	Temp(C)	15.5	15.5	15.0	15.5	15.5
Control	pH	7.8				8.4
	O2 ppm	8.3				9.7
	Cond.	536				535
	Temp(C)	15.5	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900740

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 08/29/90
Received : 08/29/90
Tested : 08/29/90 at: 1630

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900740

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.3
	O2 ppm	8.1				9.2
	Cond.	327				537
	Temp(C)	15.5	15.5	15.0	15.0	15.0
100	pH	8.0				8.2
	O2 ppm	8.1				9.0
	Cond.	327				537
	Temp(C)	15.5	15.5	15.0	15.0	15.0
Control	pH	7.7				7.8
	O2 ppm	7.5				9.0
	Cond.	535				332
	Temp(C)	15.5	15.5	15.0	15.0	15.0
Control	pH	7.7				7.8
	O2 ppm	7.5				9.0
	Cond.	535				331
	Temp(C)	15.5	15.5	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900846

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 09/26/90
Received : 09/26/90
Tested : 09/26/90 at: 1535

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900846

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.1
	O2 ppm	9.1				9.7
	Cond.	307				312
	Temp(C)	15.0	15.5	15.0	15.5	15.5
100	pH	8.2				8.1
	O2 ppm	9.1				9.8
	Cond.	307				310
	Temp(C)	15.0	15.5	15.0	15.5	15.5
Control	pH	8.0				8.5
	O2 ppm	8.8				9.8
	Cond.	536				504
	Temp(C)	15.0	15.5	15.0	15.5	15.5
Control	pH	8.0				8.5
	O2 ppm	8.8				9.8
	Cond.	536				504
	Temp(C)	15.0	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900928

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 10/24/90
Received : 10/24/90
Tested : 10/25/90 at: 1010

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900928

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.0
	O2 ppm	9.6				8.9
	Cond.	322				330
	Temp(C)	15.5	15.0	14.0	14.0	15.0
100	pH	8.2				8.2
	O2 ppm	9.6				9.5
	Cond.	322				333
	Temp(C)	15.5	15.0	14.0	14.0	15.0
Control	pH	7.9				8.3
	O2 ppm	8.5				9.2
	Cond.	536				536
	Temp(C)	15.5	15.0	14.0	14.0	15.0
Control	pH	7.9				8.5
	O2 ppm	8.5				8.4
	Cond.	536				534
	Temp(C)	15.5	15.0	14.0	14.0	15.0

COMPANY: Atlas Specialty Steel, Welland (1610005)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY

Data for twenty-two Daphnia magna acute lethality toxicity tests conducted on samples of intake water (1100) and 42 inch sewer (100) effluent collected between November 1989 and September 1990 were submitted by Atlas Specialty Steel of Welland.

Six of eleven samples of intake water were not acutely lethal to Daphnia. Five remaining samples had LC50s > 100%.

Four samples of effluent from the 42 inch sewer were nonlethal, as was a Ministry audit sample collected in January. Two samples had LC50s > 100%. Four samples were toxic to Daphnia with LC50s between 25.5 and 95%.

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42 inch Sewer

03890290 sampled: 11/22/89 LC50: 92.8 %
95% fid. limits: 74.2 - 115.8 % slope: 6.4
comments:

03890380 sampled: 12/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

02900003 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/Many floaters in all concentration

03900068 sampled: 01/24/90 LC50: 26.2 %
95% fid. limits: 17.5 - 39.3 % slope: 2.2
comments:

03900159 sampled: 02/28/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900251 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900332 sampled: 04/25/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900420 sampled: 05/30/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900645 sampled: 07/31/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900741 sampled: 08/29/90 LC50: 50.0 - 100.0 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 Range

03900845 sampled: 09/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900927 sampled: 10/24/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Waste Acid Plant

North Plant Treatment

CEVAM

Waste Disposal Site

South Water Reclaim

Waste Well

McMaster Sewer Overflow

North Water Reclaim 42

#3 Building

Scale Pit

Rain Gauge

Intake Water

03890291 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890381 sampled: 12/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900069 sampled: 01/24/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900158 sampled: 02/28/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900252 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900333 sampled: 04/25/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900421 sampled: 05/30/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900532 sampled: 06/27/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900646 sampled: 07/31/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900740 sampled: 08/29/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900846 sampled: 09/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900928 sampled: 10/24/90 LC50: 55.6 %
95% fid. limits: 36.7 - 84.0 % slope: 2.8
comments:

Compressors Reclaim

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890290

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/23/89 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	7	58

48 Hour LC50 : 92.8 %

95% fid. limits : 74.2 - 115.8 %

Comments :

SLOPE of Mortality Curve : 6.4
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890290

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
Control	pH	8.5			8.5
	O2 ppm	8.6			9.1
	Cond.	298			297
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.4
	O2 ppm	8.6			9.4
	Cond.	305			309
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.6			9.4
	Cond.	352			322
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.6			9.4
	Cond.	347			341
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.2			8.2
	O2 ppm	8.6			9.3
	Cond.	388			382
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	7.9			8.1
	O2 ppm	8.9			9.1
	Cond.	475			465
	Temp(C)	20.0	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890380

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 12/20/89
Received : 12/20/89
Tested : 12/21/89 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890380

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	10.2		9.0
	Cond.	340		347
	Temp(C)	19.0	19.0	19.0
50	pH	8.2		8.3
	O2 ppm	9.6		8.9
	Cond.	321		327
	Temp(C)	19.0	19.0	19.0
25	pH	8.2		8.3
	O2 ppm	9.3		8.9
	Cond.	312		317
	Temp(C)	19.0	19.0	19.0
13	pH	8.3		8.3
	O2 ppm	9.3		8.8
	Cond.	308		313
	Temp(C)	19.0	19.0	19.0
6	pH	8.4		8.3
	O2 ppm	9.6		8.9
	Cond.	307		311
	Temp(C)	19.0	19.0	19.0
Control	pH	8.4		8.3
	O2 ppm	9.6		8.7
	Cond.	308		310
	Temp(C)	19.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900003

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/18/90 at: 1023

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit/Many floaters in all concentration

SLOPE of Mortality Curve :
LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900003

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH	7.6			7.9
	O2 ppm	10.3			7.7
	Cond.	476			454
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.8			7.8
	O2 ppm	9.6			7.6
	Cond.	413			408
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.9			7.9
	O2 ppm	9.3			7.9
	Cond.	364			358
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			7.9
	O2 ppm	9.1			7.9
	Cond.	337			336
	Temp(C)	20.0	20.0	20.0	23.0
5	pH	8.0			7.9
	O2 ppm	9.1			7.9
	Cond.	320			320
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.8
	O2 ppm	9.1			8.0
	Cond.	325			325
	Temp(C)	20.0	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900068

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 01/24/90
Received : 01/24/90
Tested : 01/25/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	5	12	100
50	0	0	9	75
25	0	0	5	41
13	0	1	1	8
6	0	1	2	16
Control	0	0	0	0

48 Hour LC50 : 26.2 %

95% fid. limits : 17.5 - 39.3 %

Comments :

SLOPE of Mortality Curve : 2.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900068

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.0		8.4
	Cond.	466		469
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.3
	O2 ppm	8.9		8.4
	Cond.	377		382
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.4
	O2 ppm	8.7		8.4
	Cond.	339		344
	Temp(C)	20.0	20.0	20.0
13	pH	8.4		8.4
	O2 ppm	8.6		8.4
	Cond.	321		324
	Temp(C)	20.0	20.0	20.0
6	pH	8.4		8.4
	O2 ppm	8.6		8.3
	Cond.	310		311
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.3
	Cond.	299		297
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900159

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 02/28/90
Received : 02/28/90
Tested : 03/01/90 at: 1050

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	6	50
50	0	3	3	25
25	0	2	5	41
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900159

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		8.1
	O2 ppm	8.9		8.5
	Cond.	425		420
	Temp(C)	20.0	20.0	20.5
50	pH	8.1		8.3
	O2 ppm	8.8		8.6
	Cond.	365		362
	Temp(C)	20.0	20.0	20.5
25	pH	8.3		8.4
	O2 ppm	8.7		8.6
	Cond.	336		328
	Temp(C)	20.0	20.0	20.5
13	pH	8.4		8.4
	O2 ppm	8.7		8.1
	Cond.	320		316
	Temp(C)	20.0	20.0	20.5
6	pH	8.4		8.4
	O2 ppm	8.7		8.6
	Cond.	309		309
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		9.0
	Cond.	300		306
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900251

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 03/28/90
Received : 03/28/90
Tested : 03/28/90 at: 1620

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900251

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	9.3		8.6
	Cond.	339		344
	Temp(C)	20.0	20.0	20.0
50	pH	8.0		8.1
	O2 ppm	9.1		8.7
	Cond.	320		321
	Temp(C)	20.0	20.0	20.0
25	pH	8.1		8.2
	O2 ppm	9.0		8.8
	Cond.	310		311
	Temp(C)	20.0	20.0	20.0
13	pH	8.0		8.2
	O2 ppm	9.1		8.7
	Cond.	305		309
	Temp(C)	20.0	20.0	20.0
6	pH	8.0		8.2
	O2 ppm	9.2		8.7
	Cond.	302		306
	Temp(C)	20.0	20.0	20.0
Control	pH	8.1		8.2
	O2 ppm	8.9		8.6
	Cond.	301		304
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900332

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 04/25/90
Received : 04/25/90
Tested : 04/26/90 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	1	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900332

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.1		8.7
	Cond.	474		463
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.1		8.7
	Cond.	391		382
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	347		341
	Temp(C)	20.0	20.0	20.0
13	pH	8.4		8.3
	O2 ppm	9.1		8.8
	Cond.	326		318
	Temp(C)	20.0	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	311		305
	Temp(C)	20.0	20.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.7		8.6
	Cond.	298		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900420

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 05/30/90
Received : 05/30/90
Tested : 05/30/90 at: 1535

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900420

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.2
	O2 ppm	9.1		8.5
	Cond.	406		406
	Temp(C)	19.5	20.5	20.5
50	pH	8.3		8.1
	O2 ppm	9.0		8.6
	Cond.	349		349
	Temp(C)	19.5	20.5	20.5
25	pH	8.3		8.1
	O2 ppm	9.0		8.8
	Cond.	321		321
	Temp(C)	19.5	20.5	20.5
13	pH	8.3		8.2
	O2 ppm	9.0		8.5
	Cond.	308		307
	Temp(C)	19.5	20.5	20.5
6	pH	8.3		8.1
	O2 ppm	9.0		8.5
	Cond.	300		299
	Temp(C)	19.5	20.5	20.5
Control	pH	8.3		8.2
	O2 ppm	9.0		8.5
	Cond.	298		298
	Temp(C)	19.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900645

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 07/31/90
Received : 07/31/90
Tested : 08/01/90 at: 1240

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900645

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.0		8.8
	Cond.	311		316
	Temp(C)	20.0	20.5	20.5
50	pH	8.2		8.2
	O2 ppm	9.0		8.9
	Cond.	303		310
	Temp(C)	20.0	20.5	20.5
25	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	301		306
	Temp(C)	20.0	20.5	20.5
13	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	299		306
	Temp(C)	20.0	20.5	20.5
6	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	299		307
	Temp(C)	20.0	20.5	20.5
Control	pH	8.4		8.3
	O2 ppm	9.0		8.9
	Cond.	302		304
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900741

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 08/29/90
Received : 08/29/90
Tested : 08/29/90 at: 1625

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	6	7	58
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	1	1	8
Control	0	1	1	8

48 Hour LC50 : 50.0 - 100.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 Range

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900741

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	8.5		8.7
	Cond.	317		322
	Temp(C)	20.5	20.5	20.5
50	pH	8.0		8.1
	O2 ppm	8.8		8.9
	Cond.	310		313
	Temp(C)	20.5	20.5	20.5
25	pH	8.0		8.1
	O2 ppm	8.9		8.9
	Cond.	307		309
	Temp(C)	20.5	20.5	20.5
13	pH	8.0		8.2
	O2 ppm	8.9		8.9
	Cond.	307		307
	Temp(C)	20.5	20.5	20.5
6	pH	8.0		8.1
	O2 ppm	8.9		8.9
	Cond.	294		306
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.1
	O2 ppm	8.9		9.1
	Cond.	278		303
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900845

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 09/26/90
Received : 09/26/90
Tested : 09/26/90 at: 1540

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	3	3	25
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900845

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.6		9.1
	Cond.	307		312
	Temp(C)	19.0	20.5	20.0
50	pH	8.2		8.2
	O2 ppm	8.8		9.2
	Cond.	303		307
	Temp(C)	19.0	20.5	20.0
25	pH	8.3		8.2
	O2 ppm	8.8		9.2
	Cond.	300		304
	Temp(C)	19.0	20.5	20.0
13	pH	8.3		8.2
	O2 ppm	8.9		9.2
	Cond.	303		303
	Temp(C)	19.0	20.5	20.0
6	pH	8.4		8.2
	O2 ppm	9.0		9.2
	Cond.	300		302
	Temp(C)	19.0	20.5	20.0
Control	pH	8.4		8.2
	O2 ppm	9.0		9.1
	Cond.	299		301
	Temp(C)	19.0	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900927

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : 42 inch Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 10/24/90
Received : 10/24/90
Tested : 10/25/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900927

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.2		9.0
	Cond.	339		346
	Temp(C)	20.5	20.0	20.0
50	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	319		326
	Temp(C)	20.5	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	313		317
	Temp(C)	20.5	20.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.9		9.0
	Cond.	309		312
	Temp(C)	20.5	20.0	20.0
6	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	308		311
	Temp(C)	20.5	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.9		8.9
	Cond.	304		309
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890291

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/23/89 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890291

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
Control	pH	8.5			8.4
	O2 ppm	8.6			9.2
	Cond.	298			298
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.3
	O2 ppm	8.6			9.2
	Cond.	301			302
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.6			9.2
	Cond.	305			300
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.6			9.2
	Cond.	304			302
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.4			8.3
	O2 ppm	8.9			9.1
	Cond.	309			309
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.2			8.2
	O2 ppm	9.7			9.0
	Cond.	325			320
	Temp(C)	20.0	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890381

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 12/20/89
Received : 12/20/89
Tested : 12/21/89 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890381

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.2
	O2 ppm	10.2		8.8
	Cond.	321		325
	Temp(C)	19.5	19.0	19.0
50	pH	8.3		8.3
	O2 ppm	9.6		8.8
	Cond.	310		317
	Temp(C)	19.5	19.0	19.0
25	pH	8.3		8.3
	O2 ppm	9.3		8.8
	Cond.	307		314
	Temp(C)	19.5	19.0	19.0
13	pH	8.3		8.3
	O2 ppm	9.2		8.8
	Cond.	306		314
	Temp(C)	19.5	19.0	19.0
6	pH	8.3		8.4
	O2 ppm	9.2		8.8
	Cond.	306		316
	Temp(C)	19.5	19.0	19.0
Control	pH	8.4		8.4
	O2 ppm	9.6		8.7
	Cond.	308		308
	Temp(C)	19.5	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900069

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 01/24/90
Received : 01/24/90
Tested : 01/25/90 at: 1120

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	1	8
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	1	1	8
Control	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900069

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.3
	O2 ppm	9.3		8.6
	Cond.	323		322
	Temp(C)	20.0	20.0	20.0
50	pH	8.3		8.4
	O2 ppm	9.3		8.6
	Cond.	308		312
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.4
	O2 ppm	8.9		8.6
	Cond.	305		307
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.8		8.7
	Cond.	302		305
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.4
	O2 ppm	8.8		8.6
	Cond.	301		305
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.5
	Cond.	299		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900158

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 02/28/90
Received : 02/28/90
Tested : 03/01/90 at: 1020

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900158

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.3
	O2 ppm	8.9		8.8
	Cond.	330		327
	Temp(C)	20.0	20.0	20.5
50	pH	8.3		8.4
	O2 ppm	8.8		8.7
	Cond.	318		314
	Temp(C)	20.0	20.0	20.5
25	pH	8.5		8.4
	O2 ppm	8.8		8.8
	Cond.	311		308
	Temp(C)	20.0	20.0	20.5
13	pH	8.5		8.5
	O2 ppm	8.8		8.7
	Cond.	308		306
	Temp(C)	20.0	20.0	20.5
6	pH	8.5		8.5
	O2 ppm	8.8		8.7
	Cond.	306		304
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		8.9
	Cond.	300		303
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900252

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 03/28/90
Received : 03/28/90
Tested : 03/28/90 at: 1630

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900252

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.2		8.7
	Cond.	330		333
	Temp(C)	19.5	20.0	20.0
50	pH	8.1		8.2
	O2 ppm	9.1		8.7
	Cond.	315		317
	Temp(C)	19.5	20.0	20.0
25	pH	8.1		8.1
	O2 ppm	9.0		8.8
	Cond.	308		313
	Temp(C)	19.5	20.0	20.0
13	pH	8.1		8.2
	O2 ppm	9.1		8.8
	Cond.	305		309
	Temp(C)	19.5	20.0	20.0
6	pH	8.1		8.2
	O2 ppm	9.1		8.8
	Cond.	301		306
	Temp(C)	19.5	20.0	20.0
Control	pH	8.1		8.2
	O2 ppm	8.9		8.7
	Cond.	301		294
	Temp(C)	19.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900333

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 04/25/90
Received : 04/25/90
Tested : 04/26/90 at: 1535

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900333

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.3		8.2
	O2 ppm	9.1		8.9
	Cond.	342		343
	Temp(C)	20.0	20.0	20.0
50	pH	8.4		8.3
	O2 ppm	9.1		8.8
	Cond.	322		322
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	314		312
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	9.2		8.7
	Cond.	[illegible]		306
	Temp(C)	20.0	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	309		304
	Temp(C)	20.0	20.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.7		8.6
	Cond.	298		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900421

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 05/30/90
Received : 05/30/90
Tested : 05/30/90 at: 1545

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900421

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.3		8.0
	O2 ppm	9.3		8.4
	Cond.	314		314
	Temp(C)	19.5	20.5	20.5
50	pH	8.3		8.1
	O2 ppm	9.2		8.5
	Cond.	303		303
	Temp(C)	19.5	20.5	20.5
25	pH	8.4		8.2
	O2 ppm	9.1		8.6
	Cond.	297		298
	Temp(C)	19.5	20.5	20.5
13	pH	8.4		8.1
	O2 ppm	9.1		8.7
	Cond.	294		296
	Temp(C)	19.5	20.5	20.5
6	pH	8.4		8.1
	O2 ppm	9.1		8.7
	Cond.	296		295
	Temp(C)	19.5	20.5	20.5
Control	pH	8.3		8.1
	O2 ppm	9.0		9.0
	Cond.	298		294
	Temp(C)	19.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900532

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 06/27/90
Received : 06/27/90
Tested : 06/27/90 at: 1635

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900532

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	9.1		8.4
	Cond.	308		310
	Temp(C)	20.5	21.0	20.5
50	pH	7.9		8.1
	O2 ppm	9.1		8.6
	Cond.	300		301
	Temp(C)	20.5	21.0	20.5
25	pH	7.9		8.2
	O2 ppm	9.1		8.6
	Cond.	294		297
	Temp(C)	20.5	21.0	20.5
13	pH	7.9		8.2
	O2 ppm	9.0		8.7
	Cond.	291		296
	Temp(C)	20.5	21.0	20.5
6	pH	7.9		8.2
	O2 ppm	8.9		8.7
	Cond.	295		295
	Temp(C)	20.5	21.0	20.5
Control	pH	8.0		8.2
	O2 ppm	9.0		8.9
	Cond.	294		295
	Temp(C)	20.5	21.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900646

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 07/31/90
Received : 07/31/90
Tested : 08/01/90 at: 1250

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900646

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	9.0		9.0
	Cond.	302		306
	Temp(C)	20.0	20.5	20.5
50	pH	8.2		8.2
	O2 ppm	9.0		9.0
	Cond.	299		299
	Temp(C)	20.0	20.5	20.5
25	pH	8.2		8.3
	O2 ppm	9.0		8.9
	Cond.	298		297
	Temp(C)	20.0	20.5	20.5
13	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	298		297
	Temp(C)	20.0	20.5	20.5
6	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	298		296
	Temp(C)	20.0	20.5	20.5
Control	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	302		298
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900740

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 08/29/90
Received : 08/29/90
Tested : 08/29/90 at: 1615

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900740

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		7.9
	O2 ppm	8.8		8.7
	Cond.	296		302
	Temp(C)	20.5	20.5	20.5
50	pH	8.0		8.1
	O2 ppm	8.9		8.8
	Cond.	298		304
	Temp(C)	20.5	20.5	20.5
25	pH	8.0		8.1
	O2 ppm	8.9		8.9
	Cond.	288		304
	Temp(C)	20.5	20.5	20.5
13	pH	8.1		8.1
	O2 ppm	8.9		8.9
	Cond.	302		304
	Temp(C)	20.5	20.5	20.5
6	pH	8.1		8.2
	O2 ppm	8.9		9.0
	Cond.	284		307
	Temp(C)	20.5	20.5	20.5
Control	pH	8.1		8.1
	O2 ppm	8.9		9.1
	Cond.	278		304
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900846

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 09/26/90
Received : 09/26/90
Tested : 09/26/90 at: 1550

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900846

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	9.2		9.2
	Cond.	301		302
	Temp(C)	19.0	20.5	20.0
50	pH	8.2		8.2
	O2 ppm	9.0		9.2
	Cond.	298		302
	Temp(C)	19.0	20.5	20.0
25	pH	8.3		8.2
	O2 ppm	8.9		9.2
	Cond.	301		302
	Temp(C)	19.0	20.5	20.0
13	pH	8.3		8.3
	O2 ppm	8.9		9.1
	Cond.	301		302
	Temp(C)	19.0	20.5	20.0
6	pH	8.3		8.3
	O2 ppm	8.9		9.1
	Cond.	299		300
	Temp(C)	19.0	20.5	20.0
Control	pH	8.4		8.2
	O2 ppm	9.0		9.1
	Cond.	299		300
	Temp(C)	19.0	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900928

TEST CONDITIONS

Company : Atlas Specialty Steel
Welland, ONT
(1610005)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : E. Vale
Date Collected : 10/24/90
Received : 10/24/90
Tested : 10/25/90 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	11	12	100
50	0	1	1	8
25	0	3	3	25
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 55.6 %

95% fid. limits : 36.7 - 84.0 %

Comments :

SLOPE of Mortality Curve : 2.8
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900928

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.1		9.0
	Cond.	313		317
	Temp(C)	20.5	20.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.1		9.0
	Cond.	308		312
	Temp(C)	20.5	20.0	20.0
25	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	306		310
	Temp(C)	20.5	20.0	20.0
13	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	305		308
	Temp(C)	20.5	20.0	20.0
6	pH	8.4		8.4
	O2 ppm	9.0		9.0
	Cond.	304		308
	Temp(C)	20.5	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.9		8.8
	Cond.	304		304
	Temp(C)	20.5	20.0	20.0

COMPANY: Dofasco, Hamilton
(1460005)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY
The data for 58 acute lethality trout bioassays conducted on samples collected from six discharge locations between November 1989 and October 1990 were submitted by Dofasco. Dofasco voluntarily submitted data for toxicity tests conducted on samples of intake water (500). All samples were nonlethal to trout except for the November sample where the 96 h LC50 was 72.7 %.
All twelve samples collected from the East Boat Slip Sewer were not acutely lethal to trout. All thirteen samples collected from the Ottawa Street Sewer were determined nonlethal. Three of four Boiler House Sewer #1 effluents were nonlethal while the fourth produced a 96 h LC50 > 100 %. All four Boiler House #2 effluent samples were determined to have been nonlethal to test fish. Eleven of thirteen samples of West Bay Front Sewer effluent were not lethal to fish while the remaining two were lethal. 96 h LC50s were 51 % and 80.6 %. Seven samples collected for audit testing by the Ministry from the the East Boat Sewer, Ottawa Street Sewer, Boiler House #1, West Bay Front Sewer and Boiler House # 2 were tested and determined to have been nonlethal to test fish.

East Boat Slip Sewer

03890285 sampled: 11/21/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890329 sampled: 12/12/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900061 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900123 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900206 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non-lethal

Dofasco (continued)

03900302 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900388 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

01900109 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900493 sampled: 06/18/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900619 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900706 sampled: 08/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900815 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900917 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

Ottawa Street Sewer

03890284 sampled: 11/21/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890332 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890333 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900057 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Dofasco (continued)

03900124 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900207 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non-lethal

03900301 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900389 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

01900107 sampled: 06/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900494 sampled: 06/18/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900620 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900707 sampled: 08/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Conc. Test; 10% mort. @ 100% eff. conc

03900816 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900918 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

Boiler House Sewer #1

03900058 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900300 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

01900111 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

01900130 sampled: 06/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900621 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900919 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

West Bay Front Sewer

03890283 sampled: 11/21/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890330 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900056 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900125 sampled: 02/20/90 LC50: 51.0 %
95% fid. limits: 40.0 - 65.0 %
comments:

03900208 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900299 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900390 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

01900112 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

Dofasco (continued)

03900495 sampled: 06/18/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900622 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900708 sampled: 08/20/90 LC50: 80.6 %
95% fid. limits: 65.0 - 100.0 %
comments:

03900920 sampled: 10/22/90 LC50: 65.0 - 100.0 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 Range 65.00 - 100.00

Bay Water Intake

03890282 sampled: 11/21/89 LC50: 72.7 %
95% fid. limits: 60.6 - 87.1 % slope: 8.1
comments:

03890331 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900059 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900126 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900205 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non-lethal

03900298 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900391 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900496 sampled: 06/18/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900623 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900709 sampled: 08/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900818 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test;non-lethal

03900921 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

Coke Plant Bio Disch

Blast Furnace Blwdwn

Steel Clarifier Disch

Cold Mill Sewer

#1 Hot Mill Discharge

Boiler House Sewer #2

03900060 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900303 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

01900110 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900624 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900922 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Dofasco (continued)

SE Coal Fields Sewer

Kenilworth

Rain Gauge

MISA Trout

TOXICITY TEST REPORT Sample: 03890285

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 11/21/89
Received : 11/21/89
Tested : 11/23/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	1	10
20	0	0	0	0	0	1	10
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890285

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.5
	O2 ppm	9.3					9.7
	Cond.	566					560
	Temp(C)	14.0	14.0	14.5	14.5	14.5	14.0
10	pH	7.9					8.5
	O2 ppm	9.3					9.8
	Cond.	568					540
	Temp(C)	14.0	14.0	14.5	14.5	14.5	14.0
20	pH	7.9					8.3
	O2 ppm	9.3					9.1
	Cond.	569					575
	Temp(C)	14.0	14.0	14.5	14.5	14.5	14.0
40	pH	7.9					8.2
	O2 ppm	9.3					8.9
	Cond.	578					583
	Temp(C)	14.0	14.0	14.5	14.5	14.5	14.0
65	pH	8.0					8.2
	O2 ppm	9.3					9.0
	Cond.	585					588
	Temp(C)	14.0	14.0	14.5	14.5	14.5	14.0
100	pH	8.0					8.1
	O2 ppm	9.3					9.3
	Cond.	594					602
	Temp(C)	14.0	14.0	14.5	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890329

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Boat Slip Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Spong
Date Collected	: 12/12/89
Received	: 12/12/89
Tested	: 12/13/89 at: 1825
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	1	10
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890329

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	10.4				9.2
	Cond.	625				626
	Temp(C)	14.5	14.0	14.5	14.0	14.5
65	pH	7.9				8.4
	O2 ppm	9.8				9.6
	Cond.	601				603
	Temp(C)	14.5	14.0	14.5	14.0	14.5
40	pH	7.9				8.4
	O2 ppm	9.5				9.5
	Cond.	586				590
	Temp(C)	14.5	14.0	14.5	14.0	14.5
20	pH	7.9				8.4
	O2 ppm	9.2				9.5
	Cond.	573				573
	Temp(C)	14.5	14.0	14.5	14.0	14.5
10	pH	7.9				8.5
	O2 ppm	8.9				9.6
	Cond.	566				565
	Temp(C)	14.5	14.0	14.5	14.0	14.5
5	pH	7.8				8.5
	O2 ppm	8.9				9.8
	Cond.	565				561
	Temp(C)	14.5	14.0	14.5	14.0	14.5
Control	pH	7.8				8.6
	O2 ppm	8.4				9.5
	Cond.	560				543
	Temp(C)	14.5	14.0	14.5	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900061

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/24/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900061

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.8				9.0
	Cond.	671				682
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.0				8.3
	O2 ppm	9.4				8.8
	Cond.	622				627
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.0				8.4
	O2 ppm	9.1				9.1
	Cond.	592				595
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.0				8.5
	O2 ppm	9.0				8.8
	Cond.	570				567
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	8.0				8.5
	O2 ppm	8.7				9.2
	Cond.	560				551
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	8.0				8.4
	O2 ppm	8.7				8.8
	Cond.	550				541
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	8.0				8.5
	O2 ppm	9.0				8.2
	Cond.	544				544
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900123

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/21/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900123

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.2
	O2 ppm	9.9				9.9
	Cond.	744				745
	Temp(C)	15.0	14.0	14.5	14.5	14.0
100	pH	8.2				8.0
	O2 ppm	9.9				9.6
	Cond.	744				748
	Temp(C)	15.0	14.0	14.5	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.6				9.8
	Cond.	545				541
	Temp(C)	15.0	14.0	14.5	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.6				9.6
	Cond.	545				527
	Temp(C)	15.0	14.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900206

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Singie concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900206

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.2
	O2 ppm	9.8				10.3
	Cond.	769				769
	Temp(C)	14.0	14.0	14.5	14.0	14.0
100	pH	8.2				8.2
	O2 ppm	9.8				10.1
	Cond.	769				766
	Temp(C)	14.0	14.0	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				10.1
	Cond.	549				530
	Temp(C)	15.0	14.0	14.5	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.2				10.0
	Cond.	549				527
	Temp(C)	15.0	14.0	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900302

TEST CONDITIONS

Company	: Dofesco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Boat Slip Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 04/16/90
Received	: 04/17/90
Tested	: 04/17/90 at: 1530
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900302

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.2				9.2
	Cond.	752				774
	Temp(C)	15.0	14.0	14.0	14.5	15.5
100	pH	8.1				8.1
	O2 ppm	10.2				9.4
	Cond.	752				775
	Temp(C)	15.0	14.0	14.0	14.5	15.5
Control	pH	7.9				8.2
	O2 ppm	9.0				8.9
	Cond.	540				549
	Temp(C)	15.0	14.0	14.0	14.5	15.5
Control	pH	7.9				8.4
	O2 ppm	9.0				9.4
	Cond.	540				546
	Temp(C)	15.0	14.0	14.0	14.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900388

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Boat Slip Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Spong
Date Collected	: 05/14/90
Received	: 05/15/90
Tested	: 05/16/90 at: 935
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900388

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	8.3				9.0
	Cond.	740				741
	Temp(C)	16.0	15.0	14.5	14.0	15.0
100	pH	8.0				8.0
	O2 ppm	8.3				8.7
	Cond.	740				738
	Temp(C)	16.0	15.0	14.5	14.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.6
	Cond.	549				548
	Temp(C)	16.0	15.0	14.5	14.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.5
	Cond.	549				544
	Temp(C)	16.0	15.0	14.5	14.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900109

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900109

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	7.5			7.7	7.8	7.7	7.7	7.9
	O2 ppm	7.3			9.2	9.5	9.5	8.7	9.2
	Cond.	650			580	720	730	600	580
	Temp(C)	15.0			15.0	15.0	15.0	15.0	15.0
65	pH				7.8	7.8	7.8	7.8	7.9
	O2 ppm				9.3	9.5	9.5	8.7	9.3
	Cond.				475	580	585	485	410
	Temp(C)				15.0	15.0	15.0	15.0	15.0
40	pH				7.8	7.8	7.8	7.7	8.0
	O2 ppm				9.3	9.5	9.6	8.6	9.3
	Cond.				400	480	500	410	395
	Temp(C)				15.0	15.0	15.0	15.0	15.0
30	pH				7.8	7.8	7.9	7.8	7.9
	O2 ppm				9.4	9.5	9.6	8.7	9.2
	Cond.				335	450	470	375	365
	Temp(C)				15.0	15.0	15.0	15.0	15.0
20	pH				7.9	7.8	7.8	7.9	7.9
	O2 ppm				9.4	9.5	9.6	8.7	9.3
	Cond.				335	415	445	345	335
	Temp(C)				15.0	15.0	15.0	15.0	15.0
10	pH				7.8	7.8	7.8	7.8	7.9
	O2 ppm				9.3	9.5	9.6	8.7	9.3
	Cond.				305	415	385	310	300
	Temp(C)				15.0	15.0	15.0	15.0	15.0
Control	pH				7.8	7.7	7.8	7.7	7.7
	O2 ppm				9.2	9.5	9.6	8.7	9.2
	Cond.				270	325	340	275	270
	Temp(C)				15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900493

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1045

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900493

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.9
	O2 ppm	9.0				8.6
	Cond.	752				740
	Temp(C)	16.0	16.0	16.0	15.5	16.0
100	pH	7.9				8.1
	O2 ppm	9.0				9.1
	Cond.	756				743
	Temp(C)	16.0	16.0	16.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	9.7				8.6
	Cond.	541				542
	Temp(C)	16.0	16.0	16.0	15.5	16.0
Control	pH	7.9				8.5
	O2 ppm	9.8				8.4
	Cond.	539				535
	Temp(C)	16.0	16.0	16.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900619

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1005

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900619

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	9.2				9.0
	Cond.	648				646
	Temp(C)	16.0	15.5	15.5	14.5	15.0
100	pH	8.0				8.0
	O2 ppm	9.2				9.1
	Cond.	648				653
	Temp(C)	16.0	15.5	15.5	14.5	15.0
Control	pH	7.9				8.3
	O2 ppm	9.5				8.2
	Cond.	549				537
	Temp(C)	16.0	15.5	15.5	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	9.5				8.8
	Cond.	549				542
	Temp(C)	16.0	15.5	15.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900706

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1520

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900706

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				7.9
	O2 ppm	9.2				9.3
	Cond.	580				583
	Temp(C)	15.0	15.5	15.5	15.5	16.0
100	pH	8.2				7.9
	O2 ppm	9.2				9.2
	Cond.	580				585
	Temp(C)	15.0	15.5	15.5	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	8.2				9.4
	Cond.	539				533
	Temp(C)	15.0	15.5	15.5	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	8.2				9.4
	Cond.	537				536
	Temp(C)	15.0	15.5	15.5	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900815

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/19/90 at: 930

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900815

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.1
	O2 ppm	8.4				8.9
	Cond.	592				595
	Temp(C)	16.0	16.0	15.5	15.5	15.5
100	pH	8.2				8.0
	O2 ppm	8.4				9.3
	Cond.	592				596
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	8.6				9.0
	Cond.	543				532
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	8.6				9.4
	Cond.	543				526
	Temp(C)	16.0	16.0	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900917

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/23/90 at: 1455

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900917

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.0				10.0
	Cond.	555				555
	Temp(C)	15.5	15.0	15.5	14.0	14.0
100	pH	8.1				8.1
	O2 ppm	9.0				10.0
	Cond.	555				555
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.7				10.0
	Cond.	555				545
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	8.0				8.4
	O2 ppm	8.6				9.5
	Cond.	553				541
	Temp(C)	15.5	15.0	15.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890284

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 11/21/89
Received : 11/21/89
Tested : 11/23/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890284

TEST CONC.		ELAPSED TIME					
%		00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.5
	O2 ppm	9.0					9.8
	Cond.	563					559
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
10	pH	7.9					8.5
	O2 ppm	9.1					9.6
	Cond.	565					572
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
20	pH	7.9					8.4
	O2 ppm	9.2					9.4
	Cond.	574					582
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
40	pH	7.9					8.4
	O2 ppm	9.1					9.6
	Cond.	595					600
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
65	pH	7.9					8.4
	O2 ppm	9.2					9.6
	Cond.	615					622
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
100	pH	7.8					8.3
	O2 ppm	9.1					9.7
	Cond.	644					654
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890332

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1800

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890332

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.2
	O2 ppm	10.1				9.4
	Cond.	616				637
	Temp(C)	14.5	14.0	14.0	14.0	14.0
65	pH	7.8				8.3
	O2 ppm	9.5				9.4
	Cond.	606				608
	Temp(C)	14.5	14.0	14.0	14.0	14.0
40	pH	7.8				8.4
	O2 ppm	9.3				9.3
	Cond.	588				586
	Temp(C)	14.5	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	9.1				9.3
	Cond.	568				568
	Temp(C)	14.5	14.0	14.0	14.0	14.0
10	pH	7.8				8.4
	O2 ppm	8.9				9.1
	Cond.	564				566
	Temp(C)	14.5	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	8.8				9.3
	Cond.	562				555
	Temp(C)	14.5	14.0	14.0	14.0	14.0
Control	pH	7.8				8.6
	O2 ppm	8.5				9.5
	Cond.	561				543
	Temp(C)	14.5	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890333

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1800

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890333

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.1
	O2 ppm	9.8				9.2
	Cond.	614				635
	Temp(C)	14.5	14.0	14.0	14.0	14.0
65	pH	7.8				8.2
	O2 ppm	9.6				9.1
	Cond.	590				608
	Temp(C)	14.5	14.0	14.0	14.0	14.0
40	pH	7.8				8.3
	O2 ppm	9.5				9.2
	Cond.	584				589
	Temp(C)	14.5	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	9.2				9.3
	Cond.	567				570
	Temp(C)	14.5	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	8.9				9.3
	Cond.	561				562
	Temp(C)	14.5	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	8.7				9.2
	Cond.	560				556
	Temp(C)	14.5	14.0	14.0	14.0	14.0
Control	pH	7.8				8.6
	O2 ppm	8.4				9.5
	Cond.	558				543
	Temp(C)	14.5	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900057

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/24/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900057

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.0
	O2 ppm	9.7				8.8
	Cond.	703				715
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.9				8.2
	O2 ppm	9.3				8.9
	Cond.	643				652
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.0				8.3
	O2 ppm	9.2				8.9
	Cond.	605				608
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.0				8.4
	O2 ppm	9.2				9.0
	Cond.	572				561
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	8.0				8.4
	O2 ppm	9.2				9.2
	Cond.	556				552
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	8.0				8.4
	O2 ppm	9.2				8.8
	Cond.	549				541
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	8.0				8.5
	O2 ppm	9.4				9.4
	Cond.	538				536
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900124

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/21/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900124

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.8				9.8
	Cond.	761				761
	Temp(C)	15.0	14.0	14.5	14.5	14.0
100	pH	8.1				8.2
	O2 ppm	9.8				10.1
	Cond.	761				768
	Temp(C)	15.0	14.0	14.5	14.5	14.0
Control	pH	7.9				8.5
	O2 ppm	8.6				9.9
	Cond.	545				522
	Temp(C)	15.0	14.0	14.5	14.5	14.0
Control	pH	7.9				8.5
	O2 ppm	8.6				10.2
	Cond.	545				524
	Temp(C)	15.0	14.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900207

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1440

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900207

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	10.1				10.4
	Cond.	747				806
	Temp(C)	15.5	14.0	14.5	14.5	14.0
100	pH	8.0				8.2
	O2 ppm	10.1				10.3
	Cond.	747				799
	Temp(C)	15.5	14.0	14.5	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				10.1
	Cond.	549				541
	Temp(C)	15.0	14.0	14.5	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				10.2
	Cond.	549				540
	Temp(C)	15.0	14.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900301

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1525

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900301

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.9				9.4
	Cond.	763				778
	Temp(C)	15.0	14.0	14.0	14.5	15.5
100	pH	8.0				8.0
	O2 ppm	9.9				9.5
	Cond.	763				780
	Temp(C)	15.0	14.0	14.0	14.5	15.5
Control	pH	7.9				8.4
	O2 ppm	8.9				9.4
	Cond.	537				540
	Temp(C)	15.0	14.0	14.0	14.5	15.5
Control	pH	7.9				8.4
	O2 ppm	8.9				9.5
	Cond.	537				542
	Temp(C)	15.0	14.0	14.0	14.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900389

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 940

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900389

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	8.2				9.7
	Cond.	766				772
	Temp(C)	16.0	15.0	14.5	14.0	14.5
100	pH	7.9				8.2
	O2 ppm	8.2				9.8
	Cond.	766				775
	Temp(C)	16.0	15.0	14.5	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	9.0				10.1
	Cond.	538				534
	Temp(C)	16.0	15.0	14.5	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	9.0				10.0
	Cond.	538				542
	Temp(C)	16.0	15.0	14.5	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900107

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/12/90
Received : 06/13/90
Tested : 06/15/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OHE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900107

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	7.5			7.7	7.6	7.6	8.0	8.0
	O2 ppm	7.5			9.2	9.5	9.6	8.7	9.3
	Cond.	600			550	685	700	570	560
	Temp(C)	15.0			15.0	15.0	15.0	15.0	15.0
65	pH				7.8	7.8	7.6	7.8	7.9
	O2 ppm				9.5	9.6	9.6	8.5	9.3
	Cond.				455	560	590	470	455
	Temp(C)				15.0	15.0	15.0	15.0	15.0
40	pH				7.7	7.8	7.7	7.8	7.8
	O2 ppm				9.3	9.6	9.6	8.7	9.2
	Cond.				385	475	490	400	390
	Temp(C)				15.0	15.0	15.0	15.0	15.0
30	pH				7.7	7.6	7.7	7.6	7.9
	O2 ppm				9.3	9.6	9.6	9.0	9.2
	Cond.				355	435	435	370	355
	Temp(C)				15.0	15.0	15.0	15.0	15.0
20	pH				7.8	7.6	7.8	7.5	7.9
	O2 ppm				9.3	9.6	9.6	9.0	9.2
	Cond.				330	400	400	340	325
	Temp(C)				15.0	15.0	15.0	15.0	15.0
10	pH				7.8	7.7	7.8	7.8	7.9
	O2 ppm				9.4	9.6	9.6	9.0	9.3
	Cond.				295	360	360	305	300
	Temp(C)				15.0	15.0	15.0	15.0	15.0
Control	pH				7.7	7.6	7.7	7.7	7.7
	O2 ppm				9.3	9.5	9.5	9.0	9.3
	Cond.				265	325	330	265	265
	Temp(C)				15.0	15.0	15.0	15.0	15.0

NISA Trout

TOXICITY TEST REPORT Sample: 03900494

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1050

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900494

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.9
	O2 ppm	8.8				8.4
	Cond.	766				753
	Temp(C)	16.0	16.0	16.0	15.5	16.0
100	pH	7.9				8.2
	O2 ppm	8.8				9.0
	Cond.	766				750
	Temp(C)	16.0	16.0	16.0	15.5	16.0
Control	pH	7.9				8.5
	O2 ppm	9.6				9.1
	Cond.	534				537
	Temp(C)	16.0	16.0	16.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	9.6				9.1
	Cond.	534				540
	Temp(C)	16.0	16.0	16.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900620

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1010

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900620

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.7
	O2 ppm	9.7				7.8
	Cond.	658				660
	Temp(C)	16.0	15.5	15.5	14.5	15.0
100	pH	8.0				7.9
	O2 ppm	9.7				9.2
	Cond.	658				666
	Temp(C)	16.0	15.5	15.5	14.5	15.0
Control	pH	7.9				8.3
	O2 ppm	9.6				9.2
	Cond.	544				535
	Temp(C)	16.0	15.5	15.5	14.5	15.0
Control	pH	7.9				8.2
	O2 ppm	9.6				8.7
	Cond.	544				544
	Temp(C)	16.0	15.5	15.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900707

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: Ottawa Street Sewer, (200)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 08/20/90
Received	: 08/21/90
Tested	: 08/21/90 at: 1530
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	1	1	2	20
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: >100%
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single Conc. Test; 10% mort. @ 100% eff. conc

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900707

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	9.0				9.4
	Cond.	603				606
	Temp(C)	15.0	15.5	15.5	15.5	16.0
100	pH	8.1				7.9
	O2 ppm	9.0				9.3
	Cond.	603				606
	Temp(C)	15.0	15.5	15.5	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	8.4				9.4
	Cond.	541				538
	Temp(C)	15.0	15.5	15.5	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	8.4				9.6
	Cond.	541				535
	Temp(C)	15.0	15.5	15.5	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900816

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/19/90 at: 935

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900816

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	8.4				9.4
	Cond.	591				588
	Temp(C)	16.0	16.0	15.5	15.5	15.5
100	pH	8.1				8.1
	O2 ppm	8.4				9.4
	Cond.	591				593
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	8.6				9.0
	Cond.	543				532
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	8.6				9.4
	Cond.	543				526
	Temp(C)	16.0	16.0	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900918

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/23/90 at: 1450

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900918

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	8.8				9.6
	Cond.	569				573
	Temp(C)	15.5	15.0	15.5	14.0	14.0
100	pH	8.0				8.1
	O2 ppm	8.8				10.0
	Cond.	569				574
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.7				10.0
	Cond.	555				545
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.7				9.5
	Cond.	555				544
	Temp(C)	15.5	15.0	15.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900058

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/24/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900058

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.8				9.1
	Cond.	756				767
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.0				8.3
	O2 ppm	9.4				8.9
	Cond.	677				680
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.0				8.3
	O2 ppm	9.2				8.8
	Cond.	623				623
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.2
	O2 ppm	9.0				8.3
	Cond.	580				579
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.4
	O2 ppm	9.0				8.8
	Cond.	559				555
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.4
	O2 ppm	9.0				8.9
	Cond.	549				543
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	8.4				8.8
	Cond.	536				534
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900300

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1520

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900300

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.0				9.1
	Cond.	790				799
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.1				8.2
	O2 ppm	9.8				8.9
	Cond.	699				703
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.0				8.3
	O2 ppm	9.6				8.8
	Cond.	655				661
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.0				8.3
	O2 ppm	9.5				8.4
	Cond.	615				620
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	8.0				8.4
	O2 ppm	9.4				8.6
	Cond.	581				590
	Temp(C)	15.0	14.5	14.5	14.5	15.5
5	pH	8.0				8.4
	O2 ppm	9.2				8.9
	Cond.	562				570
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.0				8.9
	Cond.	545				541
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900111

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900111

TEST CONC. %			ELAPSED TIME 00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	7.6		7.7	7.8	7.7	7.6	7.9		
	O2 ppm	8.2		7.3	9.5	9.6	8.5	9.2		
	Cond.	640		580	695	700	600	580		
	Temp(C)	15.0		15.0	15.0	15.0	15.0	15.0		
65	pH			7.8	7.9	7.9	7.8	8.0		
	O2 ppm			8.1	9.5	9.5	8.6	9.3		
	Cond.			480	575	590	490	425		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
40	pH			7.8	7.9	7.8	7.9	7.9		
	O2 ppm			8.4	9.5	9.5	8.6	9.3		
	Cond.			400	490	495	410	395		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
30	pH			7.9	7.9	7.9	7.7	7.8		
	O2 ppm			8.1	9.6	9.5	8.7	9.3		
	Cond.			370	415	445	380	365		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
20	pH			8.0	7.9	7.9	7.6	7.9		
	O2 ppm			9.3	9.6	9.6	8.7	9.3		
	Cond.			340	370	390	345	330		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
10	pH			7.9	7.9	7.9	7.8	7.9		
	O2 ppm			9.4	9.6	9.6	8.7	9.4		
	Cond.			305	325	360	310	300		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
Control	pH			7.7	7.8	7.8	7.8	7.9		
	O2 ppm			9.1	9.6	9.6	8.6	9.4		
	Cond.			270	330	340	275	265		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		

MISA Trout

TOXICITY TEST REPORT Sample: 01900130

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/26/90
Received : 06/28/90
Tested : 06/29/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	02:00	25:00	47:00	71:00	96:00	%
100	0	0	0	0	0	2	20
65	0	0	0	0	0	1	10
40	0	0	0	0	0	1	10
30	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	1	10

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900130

TEST CONC. %		ELAPSED TIME 00:00	02:00	25:00	47:00	71:00	96:00
100	pH	7.3	7.6	7.8	7.9	7.9	7.8
	O2 ppm	8.1	9.1	10.2	9.7	9.1	8.7
	Cond.	630	570				570
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH		7.6	7.8	7.9	7.9	7.8
	O2 ppm		9.1	10.2	9.8	9.1	8.7
	Cond.		460				465
	Temp(C)		15.0	15.0	15.0	15.0	15.0
40	pH		7.7	7.8	7.9	7.9	7.8
	O2 ppm		9.2	10.2	9.8	9.1	8.7
	Cond.		390				400
	Temp(C)		15.0	15.0	15.0	15.0	15.0
30	pH		7.7	7.6	7.9	7.8	7.9
	O2 ppm		9.2	10.3	9.8	9.1	8.8
	Cond.		360				360
	Temp(C)		15.0	15.0	15.0	15.0	15.0
20	pH		7.7	7.7	7.8	7.7	7.6
	O2 ppm		9.3	10.2	9.8	9.1	8.9
	Cond.		325				330
	Temp(C)		15.0	15.0	15.0	15.0	15.0
10	pH		7.7	7.6	7.8	7.7	7.8
	O2 ppm		9.3	10.2	9.8	9.1	9.0
	Cond.		295				300
	Temp(C)		15.0	15.0	15.0	15.0	15.0
Control	pH		7.7	7.7	7.8	7.7	7.8
	O2 ppm		9.4	10.2	9.7	9.0	9.0
	Cond.		255				270
	Temp(C)		15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900621

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1110

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	1	1	1	1	10
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900621

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.5				9.7
	Cond.	639				649
	Temp(C)	15.5	15.5	15.0	14.5	14.0
65	pH	8.0				8.2
	O2 ppm	9.5				9.6
	Cond.	612				618
	Temp(C)	15.5	15.5	15.0	14.5	14.0
40	pH	7.9				8.2
	O2 ppm	9.6				9.6
	Cond.	591				586
	Temp(C)	15.5	15.5	15.0	14.5	14.0
20	pH	7.9				8.2
	O2 ppm	9.6				9.2
	Cond.	567				565
	Temp(C)	15.5	15.5	15.0	14.5	14.0
10	pH	7.9				8.4
	O2 ppm	9.6				9.6
	Cond.	552				551
	Temp(C)	15.5	15.5	15.0	14.5	14.0
5	pH	7.9				8.2
	O2 ppm	9.6				9.1
	Cond.	547				550
	Temp(C)	15.5	15.5	15.0	14.5	14.0
Control	pH	7.8				8.4
	O2 ppm	9.6				9.6
	Cond.	544				544
	Temp(C)	15.5	15.5	15.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900919

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/24/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(cm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900919

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.0				9.8
	Cond.	553				558
	Temp(C)	15.5	15.0	15.5	14.0	14.0
65	pH	8.0				8.1
	O2 ppm	8.9				9.4
	Cond.	553				554
	Temp(C)	15.5	15.0	15.5	14.0	14.0
40	pH	8.0				8.3
	O2 ppm	8.8				9.8
	Cond.	553				550
	Temp(C)	15.5	15.0	15.5	14.0	14.0
20	pH	8.0				8.4
	O2 ppm	8.8				9.7
	Cond.	553				548
	Temp(C)	15.5	15.0	15.5	14.0	14.0
10	pH	8.0				8.4
	O2 ppm	8.9				9.7
	Cond.	552				545
	Temp(C)	15.5	15.0	15.5	14.0	14.0
5	pH	8.0				8.3
	O2 ppm	8.9				9.4
	Cond.	552				546
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	8.0				8.5
	O2 ppm	8.8				10.0
	Cond.	556				524
	Temp(C)	15.5	15.0	15.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890283

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Sewer
Sampled By : S. Ma
Date Collected : 11/21/89
Received : 11/21/89
Tested : 11/23/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1985).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	1	10
20	0	0	0	0	0	1	10
40	0	0	0	0	0	0	0
65	0	0	0	0	0	1	10
100	0	0	0	0	0		

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890283

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.5
	O2 ppm	9.2					9.4
	Cond.	560					554
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
10	pH	7.9					8.5
	O2 ppm	9.2					9.1
	Cond.	561					564
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
20	pH	7.9					8.5
	O2 ppm	9.1					9.3
	Cond.	561					572
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
40	pH	7.9					8.4
	O2 ppm	9.3					9.3
	Cond.	562					574
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
65	pH	7.9					8.3
	O2 ppm	9.2					9.4
	Cond.	563					575
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0
100	pH	7.9					8.0
	O2 ppm	9.1					9.4
	Cond.	566					580
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890330

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1830

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890330

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7				8.1
	O2 ppm	8.3				9.7
	Cond.	673				677
	Temp(C)	14.5	14.0	14.5	14.0	14.0
65	pH	7.8				8.4
	O2 ppm	8.2				9.8
	Cond.	624				638
	Temp(C)	14.5	14.0	14.5	14.0	14.0
40	pH	7.8				8.4
	O2 ppm	8.7				9.7
	Cond.	617				612
	Temp(C)	14.5	14.0	14.5	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	8.9				9.6
	Cond.	580				581
	Temp(C)	14.5	14.0	14.5	14.0	14.0
10	pH	7.9				8.5
	O2 ppm	8.9				9.4
	Cond.	564				563
	Temp(C)	14.5	14.0	14.5	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	8.9				9.5
	Cond.	556				555
	Temp(C)	14.5	14.0	14.5	14.0	14.0
Control	pH	7.8				8.6
	O2 ppm	8.4				9.5
	Cond.	560				543
	Temp(C)	14.5	14.0	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900056

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/24/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	1	1	10
65	0	0	0	0	1	10
40	0	0	1	1	1	10
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900056

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.2
	O2 ppm	9.1				9.1
	Cond.	760				781
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.8				8.1
	O2 ppm	8.7				8.3
	Cond.	678				691
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.4
	O2 ppm	8.7				9.1
	Cond.	627				632
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.4
	O2 ppm	8.4				9.1
	Cond.	583				582
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.4
	O2 ppm	8.5				9.0
	Cond.	560				558
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.4
	O2 ppm	8.6				8.8
	Cond.	551				547
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.3
	O2 ppm	8.4				8.3
	Cond.	536				533
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900125

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/21/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
100	0	10	10	10	10	100
65	0	10	10	10	10	100
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 51.0 %

95% fid. limits : 40.0 - 65.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900125

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.6	8.0			
	O2 ppm	9.7	8.8			
	Cond.	789	798			
	Temp(C)	14.5	14.5			
100	pH	7.6	8.1			
	O2 ppm	9.7	8.8			
	Cond.	789	791			
	Temp(C)	14.5	14.5			
65	pH	7.8	8.3			
	O2 ppm	9.4	9.7			
	Cond.	704	706			
	Temp(C)	14.5	14.5			
40	pH	7.9				8.3
	O2 ppm	9.1				9.2
	Cond.	660				653
	Temp(C)	14.5	14.5	14.0	14.0	14.0
20	pH	7.9				8.3
	O2 ppm	8.9				9.4
	Cond.	594				593
	Temp(C)	14.5	14.5	14.0	14.0	14.0
10	pH	7.9				8.3
	O2 ppm	8.8				9.6
	Cond.	573				568
	Temp(C)	14.5	14.5	14.0	14.0	14.0
5	pH	7.9				8.3
	O2 ppm	8.5				9.7
	Cond.	561				563
	Temp(C)	14.5	14.5	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.4				9.9
	Cond.	545				543
	Temp(C)	14.5	14.5	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900208

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1450

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900208

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	10.4				10.1
	Cond.	809				831
	Temp(C)	15.0	14.0	14.5	14.0	14.0
65	pH	7.9				8.3
	O2 ppm	9.9				10.2
	Cond.	720				727
	Temp(C)	15.0	14.0	14.5	14.0	14.0
40	pH	7.9				8.3
	O2 ppm	9.5				10.2
	Cond.	655				659
	Temp(C)	15.0	14.0	14.5	14.0	14.0
20	pH	7.9				8.3
	O2 ppm	9.3				10.0
	Cond.	583				599
	Temp(C)	15.5	14.0	14.5	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	9.2				10.3
	Cond.	559				569
	Temp(C)	15.5	14.0	14.5	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	9.2				9.9
	Cond.	549				555
	Temp(C)	16.5	14.0	14.5	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.2				10.2
	Cond.	544				543
	Temp(C)	15.0	14.0	14.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900299

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1515

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900299

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.9				8.1
	O2 ppm	10.2				9.5
	Cond.	800				823
	Temp(C)	15.0	14.0	14.0	14.5	15.5
65	pH	8.5				8.3
	O2 ppm	10.0				9.7
	Cond.	706				721
	Temp(C)	15.0	14.0	14.0	14.5	15.5
40	pH	8.1				8.4
	O2 ppm	10.1				9.6
	Cond.	633				658
	Temp(C)	15.0	14.0	14.0	14.5	15.5
20	pH	8.1				8.4
	O2 ppm	10.0				9.5
	Cond.	598				604
	Temp(C)	15.0	14.0	14.0	14.5	15.5
10	pH	8.1				8.5
	O2 ppm	9.9				9.8
	Cond.	566				564
	Temp(C)	15.0	14.0	14.0	14.5	15.5
5	pH	8.0				8.4
	O2 ppm	9.9				9.3
	Cond.	551				554
	Temp(C)	15.0	14.0	14.0	14.5	15.5
Control	pH	7.9				8.4
	O2 ppm	9.9				9.3
	Cond.	540				531
	Temp(C)	15.0	14.0	14.0	14.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900390

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 945

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900390

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	7.8				9.7
	Cond.	842				850
	Temp(C)	16.0	15.0	14.5	14.0	15.0
65	pH	7.9				8.0
	O2 ppm	7.9				9.0
	Cond.	731				742
	Temp(C)	16.0	15.0	14.5	14.0	15.0
40	pH	7.9				8.3
	O2 ppm	8.4				9.8
	Cond.	654				658
	Temp(C)	16.0	15.0	14.5	14.0	15.0
20	pH	7.9				8.4
	O2 ppm	8.6				9.9
	Cond.	596				598
	Temp(C)	16.0	15.0	14.5	14.0	15.0
10	pH	7.9				8.5
	O2 ppm	8.6				10.0
	Cond.	564				561
	Temp(C)	16.0	15.0	14.5	14.0	15.0
5	pH	7.9				8.5
	O2 ppm	8.8				10.0
	Cond.	548				538
	Temp(C)	16.0	15.0	14.5	14.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.7
	Cond.	537				535
	Temp(C)	16.0	15.0	14.5	14.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900112

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900112

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	8.1			7.9	7.8	7.8	7.8	7.8
	O2 ppm	8.0			9.1	9.6	9.6	8.6	9.1
	Cond.	700			640	790	795	660	640
	Temp(C)	15.0			15.0	15.0	15.0	15.0	15.0
65	pH				7.9	7.9	7.9	7.7	7.7
	O2 ppm				9.1	9.7	9.7	8.7	9.3
	Cond.				510	635	690	520	500
	Temp(C)				15.0	15.0	15.0	15.0	15.0
40	pH				7.9	7.8	7.8	7.8	7.8
	O2 ppm				9.3	9.6	9.6	8.5	9.4
	Cond.				425	480	520	435	420
	Temp(C)				15.0	15.0	15.0	15.0	15.0
30	pH				7.9	7.8	7.8	7.8	7.9
	O2 ppm				9.2	9.6	9.6	8.7	9.4
	Cond.				380	470	495	390	380
	Temp(C)				15.0	15.0	15.0	15.0	15.0
20	pH				7.8	7.8	7.8	7.8	7.9
	O2 ppm				9.3	9.6	9.6	8.8	9.5
	Cond.				350	430	435	355	345
	Temp(C)				15.0	15.0	15.0	15.0	15.0
10	pH				8.0	7.9	7.8	7.9	7.9
	O2 ppm				9.1	9.7	9.6	8.7	9.4
	Cond.				305	375	390	315	300
	Temp(C)				15.0	15.0	15.0	15.0	15.0
Control	pH				7.9	7.8	7.9	7.8	7.9
	O2 ppm				9.4	9.6	9.6	8.7	9.4
	Cond.				270	330	330	275	265
	Temp(C)				15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900495

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1105

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900495

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.7				7.9
	O2 ppm	8.9				8.6
	Cond.	806				810
	Temp(C)	16.0	15.5	16.0	15.5	16.0
100	pH	8.7				8.1
	O2 ppm	8.9				9.1
	Cond.	806				807
	Temp(C)	16.0	15.5	16.0	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	9.7				8.9
	Cond.	537				540
	Temp(C)	16.0	15.5	16.0	15.5	16.0
Control	pH	7.9				8.2
	O2 ppm	9.7				8.5
	Cond.	537				534
	Temp(C)	16.0	15.5	16.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900622

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1140

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900622

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.6				8.1
	O2 ppm	9.2				9.6
	Cond.	723				717
	Temp(C)	15.5	15.5	15.0	14.5	14.0
100	pH	8.6				7.9
	O2 ppm	9.2				9.3
	Cond.	723				729
	Temp(C)	15.5	15.5	15.0	14.5	14.0
Control	pH	7.8				8.5
	O2 ppm	9.3				9.4
	Cond.	540				520
	Temp(C)	15.5	15.5	15.0	14.5	14.0
Control	pH	7.8				8.4
	O2 ppm	9.3				9.3
	Cond.	540				529
	Temp(C)	15.5	15.5	15.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900708

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1540

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
100	0	10	10	10	10	100
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 80.6 %

95% fid. limits : 65.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900708

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	9.6	9.3			
	O2 ppm	8.8	8.4			
	Cond.	657	663			
	Temp(C)	15.5	16.0			
100	pH	9.6	9.3			
	O2 ppm	8.8	8.6			
	Cond.	657	665			
	Temp(C)	15.5	16.0			
65	pH	8.9				8.3
	O2 ppm	8.9				9.3
	Cond.	612				633
	Temp(C)	15.5	16.0	15.5	15.5	16.0
40	pH	8.4				8.3
	O2 ppm	9.1				9.3
	Cond.	588				594
	Temp(C)	15.5	16.0	15.5	15.5	16.0
20	pH	7.9				8.2
	O2 ppm	9.2				8.8
	Cond.	573				568
	Temp(C)	15.5	16.0	15.5	15.5	16.0
10	pH	7.8				8.4
	O2 ppm	9.1				9.3
	Cond.	559				547
	Temp(C)	15.5	16.0	15.5	15.5	16.0
5	pH	7.7				8.4
	O2 ppm	9.2				9.0
	Cond.	545				541
	Temp(C)	15.5	16.0	15.5	15.5	16.0
Control	pH	7.8				8.4
	O2 ppm	9.3				9.5
	Cond.	543				537
	Temp(C)	15.5	16.0	15.5	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900920

TEST CONDITIONS

Company	: Pofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: West Bay Front Sewer, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 10/22/90
Received	: 10/23/90
Tested	: 10/24/90 at: 1105
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	4	4	4	4	66
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: 65.0 - 100.0	%
95% fid. limits	: 0.0 - 0.0	%
Comments	: LC50 Range 65.00 - 100.00	

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900920

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	9.2	8.8			
	O2 ppm	9.7	8.4			
	Cond.	628	633			
	Temp(C)	15.5	15.0	15.5	14.0	14.0
65	pH	8.7				8.1
	O2 ppm	9.7				9.6
	Cond.	604				616
	Temp(C)	15.5	15.0	15.5	14.0	14.0
40	pH	8.4				8.4
	O2 ppm	9.3				9.8
	Cond.	583				586
	Temp(C)	15.5	15.0	15.5	14.0	14.0
20	pH	8.1				8.0
	O2 ppm	9.1				8.6
	Cond.	568				571
	Temp(C)	15.5	15.0	15.5	14.0	14.0
10	pH	8.0				8.5
	O2 ppm	9.1				10.1
	Cond.	561				553
	Temp(C)	15.5	15.0	15.5	14.0	14.0
5	pH	8.0				8.5
	O2 ppm	9.0				9.9
	Cond.	559				547
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	8.0				8.5
	O2 ppm	8.9				10.0
	Cond.	556				524
	Temp(C)	15.5	15.0	15.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890282

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ma
Date Collected : 11/21/89
Received : 11/21/89
Tested : 11/23/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	2	20
100	0	0	0	4	10	10	10	10	100

96 Hour LC50 : 72.7 %

95% fid. limits : 60.6 - 87.1 %

Comments :

SLOPE of Mortality Curve : 8.1
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890282

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9							8.6
	O2 ppm	9.3							9.5
	Cond.	560							557
	Temp(C)	14.5	14.0	14.0	14.5	14.5	14.5	14.5	14.0
10	pH	7.9							8.6
	O2 ppm	9.3							9.6
	Cond.	568							555
	Temp(C)	14.5	14.0	14.0	14.5	14.5	14.5	14.5	14.0
20	pH	7.9							8.5
	O2 ppm	9.1							9.5
	Cond.	575							579
	Temp(C)	14.5	14.0	14.0	14.5	14.5	14.5	14.5	14.0
40	pH	8.0							8.5
	O2 ppm	9.2							9.7
	Cond.	589							594
	Temp(C)	14.5	14.0	14.0	14.5	14.5	14.5	14.5	14.0
65	pH	8.1							8.4
	O2 ppm	9.2							9.7
	Cond.	598							619
	Temp(C)	14.5	14.0	14.0	14.5	14.5	14.5	14.5	14.0
100	pH	8.5				8.2			
	O2 ppm	9.3				9.6			
	Cond.	623				635			
	Temp(C)	14.5	14.0	14.0	14.5	14.5			

MISA Trout

TOXICITY TEST REPORT Sample: 03890331

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1800

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890331

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.0
	O2 ppm	10.3				9.3
	Cond.	600				605
	Temp(C)	14.5	14.0	14.5	14.5	14.5
65	pH	7.9				8.3
	O2 ppm	9.8				9.5
	Cond.	583				585
	Temp(C)	14.5	14.0	14.5	14.5	14.5
40	pH	7.9				8.4
	O2 ppm	9.4				9.5
	Cond.	572				575
	Temp(C)	14.5	14.0	14.5	14.5	14.5
20	pH	7.9				8.5
	O2 ppm	9.2				9.6
	Cond.	566				569
	Temp(C)	14.5	14.0	14.5	14.5	14.5
10	pH	7.9				8.5
	O2 ppm	9.1				9.6
	Cond.	565				564
	Temp(C)	14.5	14.0	14.5	14.5	14.5
5	pH	7.9				8.5
	O2 ppm	9.1				9.6
	Cond.	560				559
	Temp(C)	14.5	14.0	14.5	14.5	14.5
Control	pH	7.8				8.6
	O2 ppm	8.4				9.5
	Cond.	560				543
	Temp(C)	14.5	14.0	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900059

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Ma
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/24/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900059

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	9.1				9.0
	Cond.	753				759
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.9				8.4
	O2 ppm	8.9				9.0
	Cond.	680				675
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.0				8.4
	O2 ppm	8.7				8.9
	Cond.	626				623
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.0				8.3
	O2 ppm	8.9				8.6
	Cond.	586				586
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	8.0				8.4
	O2 ppm	9.0				9.1
	Cond.	560				564
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	8.0				8.5
	O2 ppm	9.0				9.0
	Cond.	554				554
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	8.0				8.4
	O2 ppm	9.0				8.8
	Cond.	550				542
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900126

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/21/90 at: 1010

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900126

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	10.3				9.7
	Cond.	714				719
	Temp(C)	15.0	14.0	14.5	14.5	14.0
65	pH	8.0				8.3
	O2 ppm	10.0				10.2
	Cond.	646				655
	Temp(C)	15.0	14.0	14.5	14.5	14.0
40	pH	8.0				8.3
	O2 ppm	9.7				10.1
	Cond.	602				615
	Temp(C)	15.0	14.0	14.5	14.5	14.0
20	pH	8.0				8.5
	O2 ppm	9.0				10.2
	Cond.	579				568
	Temp(C)	15.0	14.0	14.5	14.5	14.0
10	pH	7.9				8.5
	O2 ppm	8.7				10.2
	Cond.	560				550
	Temp(C)	15.0	14.0	14.5	14.5	14.0
5	pH	7.9				8.5
	O2 ppm	8.7				10.2
	Cond.	549				545
	Temp(C)	15.0	14.0	14.5	14.5	14.0
Control	pH	7.9				8.5
	O2 ppm	7.8				10.1
	Cond.	544				522
	Temp(C)	15.0	14.0	14.5	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900205

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: Bay Water Intake, (500)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Spong
Date Collected	: 03/19/90
Received	: 03/20/90
Tested	: 03/20/90 at: 1420
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Single concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900205

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.0
	O2 ppm	11.5				9.9
	Cond.	765				770
	Temp(C)	15.0	14.0	14.0	14.0	14.0
100	pH	8.3				8.0
	O2 ppm	11.5				10.1
	Cond.	765				768
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.2				9.8
	Cond.	549				550
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.2				10.4
	Cond.	549				540
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900298

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: Bay Water Intake, (500)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 04/16/90
Received	: 04/17/90
Tested	: 04/17/90 at: 1545
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900298

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.3
	O2 ppm	10.2				9.4
	Cond.	760				764
	Temp(C)	15.0	14.5	14.0	14.5	15.0
100	pH	8.1				8.2
	O2 ppm	10.2				9.3
	Cond.	760				769
	Temp(C)	15.0	14.5	14.0	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	9.0				8.8
	Cond.	540				541
	Temp(C)	15.0	14.5	14.0	14.5	15.0
Control	pH	7.9				8.5
	O2 ppm	9.0				9.3
	Cond.	540				533
	Temp(C)	15.0	14.5	14.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900391

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 950

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	1	1	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900391

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.2
	O2 ppm	8.8				9.9
	Cond.	742				744
	Temp(C)	16.0	15.0	14.5	14.0	14.5
100	pH	8.0				8.3
	O2 ppm	8.8				9.9
	Cond.	742				747
	Temp(C)	16.0	15.0	14.5	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	9.1				10.0
	Cond.	541				541
	Temp(C)	16.0	15.0	14.5	14.0	14.5
Control	pH	7.9				8.4
	O2 ppm	9.1				9.6
	Cond.	541				548
	Temp(C)	16.0	15.0	14.5	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900496

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1110

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900496

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.1
	O2 ppm	9.2				9.2
	Cond.	759				749
	Temp(C)	16.0	15.5	16.0	15.5	15.5
100	pH	7.9				7.9
	O2 ppm	9.2				8.6
	Cond.	759				750
	Temp(C)	16.0	15.5	16.0	15.5	15.5
Control	pH	7.9				8.5
	O2 ppm	9.6				9.3
	Cond.	538				536
	Temp(C)	16.0	15.5	16.0	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	9.6				9.1
	Cond.	538				539
	Temp(C)	16.0	15.5	16.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900623

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1400

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900623

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.6				9.5
	Cond.	636				633
	Temp(C)	15.0	15.0	15.0	15.0	14.5
100	pH	8.0				7.8
	O2 ppm	9.6				9.0
	Cond.	636				641
	Temp(C)	15.0	15.0	15.0	15.0	14.5
Control	pH	7.8				8.3
	O2 ppm	9.6				9.4
	Cond.	545				533
	Temp(C)	15.0	15.0	15.0	15.0	14.5
Control	pH	7.8				8.2
	O2 ppm	9.3				8.9
	Cond.	545				534
	Temp(C)	15.0	15.0	15.0	15.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900709

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1615

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900709

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.1				9.6
	Cond.	591				587
	Temp(C)	16.0	15.5	15.5	15.5	16.0
100	pH	8.1				8.0
	O2 ppm	9.1				9.7
	Cond.	591				588
	Temp(C)	16.0	15.5	15.5	15.5	16.0
Control	pH	7.8				8.3
	O2 ppm	9.2				9.5
	Cond.	544				537
	Temp(C)	16.0	15.5	15.5	15.5	16.0
Control	pH	7.8				8.3
	O2 ppm	9.2				9.6
	Cond.	544				533
	Temp(C)	16.0	15.5	15.5	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900818

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/19/90 at: 945

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test;non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900818

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	8.6				9.0
	Cond.	579				577
	Temp(C)	16.0	16.0	15.5	15.5	15.5
100	pH	8.1				8.1
	O2 ppm	8.6				9.2
	Cond.	579				581
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	8.6				9.0
	Cond.	543				532
	Temp(C)	16.0	16.0	15.5	15.5	15.5
Control	pH	8.0				8.4
	O2 ppm	8.6				9.4
	Cond.	543				526
	Temp(C)	16.0	16.0	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900921

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: Bay Water Intake, (500)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 10/22/90
Received	: 10/23/90
Tested	: 10/23/90 at: 1500
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900921

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.9
	O2 ppm	9.3				9.6
	Cond.	552				553
	Temp(C)	15.5	15.0	15.5	14.0	14.0
100	pH	8.0				8.0
	O2 ppm	9.3				9.9
	Cond.	552				552
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	8.7				10.0
	Cond.	555				545
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	8.0				8.4
	O2 ppm	8.6				9.5
	Cond.	556				541
	Temp(C)	15.5	15.0	15.5	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900060

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/24/90 at: 1600

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900060

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.3
	O2 ppm	9.8				9.4
	Cond.	660				660
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.0				8.3
	O2 ppm	9.5				9.2
	Cond.	613				617
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.0				8.5
	O2 ppm	9.2				9.3
	Cond.	592				583
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.0				8.5
	O2 ppm	9.2				9.2
	Cond.	569				560
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	8.0				8.4
	O2 ppm	9.2				8.9
	Cond.	558				552
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	8.0				8.5
	O2 ppm	8.9				9.4
	Cond.	550				539
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.5
	O2 ppm	8.9				9.4
	Cond.	544				525
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900303

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ma
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1535

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900303

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.3
	O2 ppm	9.9				9.4
	Cond.	758				761
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.2				8.3
	O2 ppm	9.5				9.3
	Cond.	703				708
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	8.2				8.3
	O2 ppm	9.2				9.4
	Cond.	678				681
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	8.1				8.4
	O2 ppm	9.2				9.3
	Cond.	651				660
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	8.0				8.4
	O2 ppm	9.1				9.3
	Cond.	628				632
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	8.0				8.4
	O2 ppm	9.1				9.2
	Cond.	601				611
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.0				9.4
	Cond.	550				558
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900110

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : [illegible] Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900110

TEST CONC. %			ELAPSED TIME 00:00	00:30	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	7.6		7.9	8.0	8.1	7.9	8.0		
	O2 ppm	7.5		9.4	9.6	9.6	8.6	9.4		
	Cond.	635		560	700	690	580	560		
	Temp(C)	15.0		15.0	15.0	15.0	15.0	15.0		
65	pH			7.8	7.9	7.9	7.8	7.9		
	O2 ppm			8.4	9.6	9.6	8.6	9.2		
	Cond.			460	570	590	475	455		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
40	pH			7.8	7.9	7.9	7.9	7.9		
	O2 ppm			9.4	9.6	9.6	8.7	9.4		
	Cond.			390	480	500	400	385		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
30	pH			7.8	7.8	7.9	7.8	7.9		
	O2 ppm			9.9	9.6	9.6	8.7	9.3		
	Cond.			360	440	485	370	355		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
20	pH			7.9	7.8	7.8	7.9	8.0		
	O2 ppm			9.5	9.6	9.6	8.8	9.4		
	Cond.			330	410	440	335	325		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
10	pH			7.8	7.7	7.9	7.9	7.9		
	O2 ppm			9.4	9.6	9.7	8.6	9.4		
	Cond.			300	375	395	305	295		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		
Control	pH			7.8	7.9	7.8	7.9	7.9		
	O2 ppm			9.4	9.6	9.6	8.7	9.4		
	Cond.			275	330	335	270	265		
	Temp(C)			15.0	15.0	15.0	15.0	15.0		

MISA Trout

TOXICITY TEST REPORT Sample: 03900624

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1420

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900624

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	9.7				9.6
	Cond.	630				633
	Temp(C)	15.5	15.0	15.0	15.0	14.0
65	pH	7.9				8.0
	O2 ppm	9.6				8.7
	Cond.	596				600
	Temp(C)	15.5	15.0	15.0	15.0	14.0
40	pH	7.9				8.2
	O2 ppm	9.6				9.0
	Cond.	573				574
	Temp(C)	15.5	15.0	15.0	15.0	14.0
20	pH	7.9				8.1
	O2 ppm	9.5				9.1
	Cond.	554				553
	Temp(C)	15.5	15.0	15.0	15.0	14.0
10	pH	7.8				8.4
	O2 ppm	9.5				9.5
	Cond.	546				538
	Temp(C)	15.5	15.0	15.0	15.0	14.0
5	pH	7.8				8.4
	O2 ppm	9.4				9.2
	Cond.	541				532
	Temp(C)	15.5	15.0	15.0	15.0	14.0
Control	pH	7.8				8.4
	O2 ppm	9.4				9.5
	Cond.	539				526
	Temp(C)	15.5	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900922

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAB
Sampling Method : Grab
Sampled By : S. Ma
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/24/90 at: 1110

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900922

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.5				9.9
	Cond.	546				546
	Temp(C)	15.5	15.0	15.5	14.0	14.0
65	pH	8.0				8.2
	O2 ppm	9.3				9.9
	Cond.	546				545
	Temp(C)	15.5	15.0	15.5	14.0	14.0
40	pH	8.0				8.2
	O2 ppm	9.2				9.6
	Cond.	546				544
	Temp(C)	15.5	15.0	15.5	14.0	14.0
20	pH	7.9				8.3
	O2 ppm	8.9				9.8
	Cond.	547				541
	Temp(C)	15.5	15.0	15.5	14.0	14.0
10	pH	7.9				8.2
	O2 ppm	8.7				9.5
	Cond.	547				542
	Temp(C)	15.5	15.0	15.5	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	8.7				10.0
	Cond.	548				533
	Temp(C)	15.5	15.0	15.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.9				9.8
	Cond.	548				537
	Temp(C)	15.5	15.0	15.5	14.0	14.0

COMPANY: Dofasco, Hamilton (1460005)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY

Data for 50 Daphnia magna acute lethality toxicity tests conducted on samples of effluent from six different discharge points collected between November 1989 and September 1990 were submitted by Dofasco of Hamilton. Toxicity was random and variable for all outfalls.

Dofasco voluntarily submitted data for toxicity tests conducted on samples of intake water (500). All samples were either nonlethal to Daphnia, or had LC50s > 100%.

The three samples for boiler house #1 (300) had LC50s > 100% as did the Ministry audit sample. Two samples from boiler house sewer #2 (1200) were not acutely lethal to Daphnia and the other two samples had LC50s > 100%.

Eight of eleven samples from the east boat slip sewer were not acutely lethal to Daphnia, and two samples had LC50s > 100%. The sample collected in December was lethal to Daphnia with a 48 h LC50 = 62%. The Ministry audit sample tested in June was non-lethal.

Eight of eleven samples from the west bay front sewer (400) were not acutely lethal to Daphnia. One sample had an LC50 > 100 %, and two samples exhibited an unusual toxic response in which the greatest number of mortalities occurred in the middle concentrations of effluent. The Ministry audit sample tested in June had an 48 h LC50 > 100%.

Seven of eleven samples from the Ottawa street sewer (200) were not acutely lethal to Daphnia, as was the Ministry audit. Two samples had LC50s > 100% and two samples induced an unusual toxic response in which the greatest number of mortalities occurred in the middle concentrations of effluent.

East Boat Slip Sewer

03890285 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890329 sampled: 12/12/89 LC50: 61.5 %
95% fid. limits: 41.7 - 122.5 % slope: 2.5
comments:

03900061 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Dofasco (continued)

03900123 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900206 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900302 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900388 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900109 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900493 sampled: 06/18/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900619 sampled: 07/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900706 sampled: 08/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900815 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900917 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Ottawa Street Sewer

03890284 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890332 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Dofasco (continued)

03890333 sampled: 12/12/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900057 sampled: 01/22/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900124 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900207 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900301 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900389 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900107 sampled: 06/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal; Some Floaters

03900494 sampled: 06/18/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900620 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900707 sampled: 08/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900816 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900918 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Boiler House Sewer #1

03900058 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900300 sampled: 04/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

02900111 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

02900130 sampled: 06/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900621 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900919 sampled: 10/22/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

West Bay Front Sewer

03890283 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890330 sampled: 12/12/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900056 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900125 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900208 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900299 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Dofasco (continued)

03900390 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900112 sampled: 06/13/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900495 sampled: 06/18/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900622 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900708 sampled: 08/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900817 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900920 sampled: 10/22/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Bay Water Intake

03890282 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890331 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900059 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900126 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900205 sampled: 03/19/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900298 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900391 sampled: 05/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900496 sampled: 06/18/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900623 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900709 sampled: 08/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900818 sampled: 09/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900921 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Coke Plant Bio Disch

Blast Furnace Blwdwn

Steel Clarifier Disch

Cold Mill Sewer

#1 Hot Mill Discharge

Boiler House Sewer #2

03900060 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900303 sampled: 04/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900110 sampled: 06/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

Dofasco (continued)

03900624 sampled: 07/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900922 sampled: 10/22/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

SE Coal Fields Sewer

Kenilworth

Rain Gauge

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890285

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 11/20/89
Received : 11/21/89
Tested : 11/21/89 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	1	2	16
50	0	0	0	0	0
100	0	0	0	2	16

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890285

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
Control	pH	8.5			8.4
	O2 ppm	9.4			8.6
	Cond.	303			305
	Temp(C)	20.0	20.0	19.5	20.0
6	pH	8.5			8.4
	O2 ppm	9.4			8.7
	Cond.	326			330
	Temp(C)	20.0	20.0	19.5	20.0
13	pH	8.5			8.3
	O2 ppm	9.1			8.8
	Cond.	342			350
	Temp(C)	20.0	20.0	19.5	20.0
25	pH	8.5			8.3
	O2 ppm	9.6			8.7
	Cond.	373			379
	Temp(C)	20.0	20.0	19.5	20.0
50	pH	8.4			8.2
	O2 ppm	9.5			8.5
	Cond.	441			444
	Temp(C)	20.0	20.0	19.5	20.0
100	pH	8.1			8.0
	O2 ppm	9.4			8.1
	Cond.	578			577
	Temp(C)	20.0	20.0	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890329

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Boat Slip Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Spong
Date Collected	: 12/12/89
Received	: 12/12/89
Tested	: 12/13/89 at: 1030
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	6	8	66
50	0	5	5	41
25	0	3	3	25
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : 61.5 %

95% fid. limits : 41.7 - 122.5 %

Comments :

SLOPE of Mortality Curve : 2.5
LC50 Calculated By : Probit.

TOXICITY TEST PARAMETERS

Sample Number: 03890329

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	9.8		8.7
	Cond.	617		618
	Temp(C)	19.5	20.0	19.5
50	pH	8.5		8.3
	O2 ppm	9.1		9.0
	Cond.	456		458
	Temp(C)	19.5	20.0	19.5
25	pH	8.6		8.4
	O2 ppm	8.8		9.2
	Cond.	375		378
	Temp(C)	19.5	20.0	19.5
13	pH	8.5		8.4
	O2 ppm	8.7		9.0
	Cond.	339		344
	Temp(C)	19.5	20.0	19.5
6	pH	8.7		8.2
	O2 ppm	8.7		9.0
	Cond.	317		320
	Temp(C)	19.5	20.0	19.5
Control	pH	8.8		8.4
	O2 ppm	8.7		9.7
	Cond.	296		303
	Temp(C)	19.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900061

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/26/90 at: 1630

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900061

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.2		8.2
	Cond.	647		656
	Temp(C)	20.0	19.0	20.5
50	pH	8.2		8.3
	O2 ppm	8.9		8.2
	Cond.	475		478
	Temp(C)	20.0	19.0	20.5
25	pH	8.3		8.4
	O2 ppm	8.8		8.3
	Cond.	390		389
	Temp(C)	20.0	19.0	20.5
13	pH	8.4		8.5
	O2 ppm	8.8		8.3
	Cond.	348		347
	Temp(C)	20.0	19.0	20.5
6	pH	8.4		8.5
	O2 ppm	8.8		8.3
	Cond.	324		322
	Temp(C)	20.0	19.0	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		8.5
	Cond.	299		302
	Temp(C)	20.0	19.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900123

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/20/90 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900123

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	9.2		8.2
	Cond.	716		721
	Temp(C)	20.0	19.5	20.0
50	pH	8.4		8.3
	O2 ppm	8.9		8.4
	Cond.	520		519
	Temp(C)	20.0	19.5	20.0
25	pH	8.5		8.4
	O2 ppm	8.9		8.5
	Cond.	417		414
	Temp(C)	20.0	19.5	20.0
13	pH	8.5		8.4
	O2 ppm	8.9		8.5
	Cond.	365		362
	Temp(C)	20.0	19.5	20.0
6	pH	8.6		8.4
	O2 ppm	8.8		8.5
	Cond.	337		335
	Temp(C)	20.0	19.5	20.0
Control	pH	8.6		8.4
	O2 ppm	8.8		8.8
	Cond.	304		307
	Temp(C)	20.0	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900206

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1610

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900206

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.0
	O2 ppm	8.9		8.2
	Cond.	749		733
	Temp(C)	21.0	20.0	20.0
50	pH	8.3		8.1
	O2 ppm	8.7		8.4
	Cond.	526		517
	Temp(C)	21.0	20.0	20.0
25	pH	8.4		8.2
	O2 ppm	8.7		8.5
	Cond.	413		408
	Temp(C)	21.0	20.0	20.0
13	pH	8.4		8.2
	O2 ppm	8.6		8.5
	Cond.	358		357
	Temp(C)	21.0	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	8.7		8.6
	Cond.	325		333
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.6		8.6
	Cond.	299		300
	Temp(C)	21.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900302

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Boat Slip Sewer, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 04/16/90
Received	: 04/17/90
Tested	: 04/18/90 at: 935
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. ONE, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900302

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.0		8.8
	Cond.	741		752
	Temp(C)	19.0	20.0	19.5
50	pH	8.2		8.2
	O2 ppm	9.0		8.9
	Cond.	530		534
	Temp(C)	19.0	20.0	19.5
25	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	416		420
	Temp(C)	19.0	20.0	19.5
13	pH	8.4		8.3
	O2 ppm	8.9		9.0
	Cond.	362		365
	Temp(C)	19.0	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	8.9		9.1
	Cond.	335		335
	Temp(C)	19.0	20.0	19.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.6
	Cond.	302		306
	Temp(C)	19.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900388

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900388

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.4		7.9
	Cond.	726		724
	Temp(C)	20.0	19.0	19.0
50	pH	8.1		8.2
	O2 ppm	8.7		8.2
	Cond.	516		511
	Temp(C)	20.0	19.0	19.0
25	pH	8.1		8.3
	O2 ppm	8.7		8.4
	Cond.	407		405
	Temp(C)	20.0	19.0	19.0
13	pH	8.2		8.2
	O2 ppm	8.8		8.9
	Cond.	353		351
	Temp(C)	20.0	19.0	19.0
6	pH	8.3		8.3
	O2 ppm	8.8		9.0
	Cond.	319		324
	Temp(C)	20.0	19.0	19.0
Control	pH	8.3		8.3
	O2 ppm	8.7		9.0
	Cond.	294		299
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900109

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900109

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	7.7					7.8
	O2 ppm	8.5					8.4
	Cond.	650					655
	Temp(C)	20.0					20.0
60	pH	7.7					7.9
	O2 ppm	8.8					8.4
	Cond.	520					515
	Temp(C)	20.0					20.0
30	pH	7.9					7.8
	O2 ppm	8.9					8.4
	Cond.	410					415
	Temp(C)	20.0					20.0
15	pH	7.9					7.6
	O2 ppm	8.8					8.5
	Cond.	360					365
	Temp(C)	20.0					20.0
5	pH	7.9					7.8
	O2 ppm	8.8					8.5
	Cond.	325					325
	Temp(C)	20.0					20.0
Control	pH	7.8					7.7
	O2 ppm	8.8					8.4
	Cond.	275					280
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900493

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1040

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900493

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.8
	O2 ppm	8.4		8.2
	Cond.	735		714
	Temp(C)	20.0	20.0	20.5
50	pH	8.0		8.0
	O2 ppm	8.8		8.6
	Cond.	522		514
	Temp(C)	20.0	20.0	20.5
25	pH	8.1		8.1
	O2 ppm	8.9		8.7
	Cond.	422		417
	Temp(C)	20.0	20.0	20.5
13	pH	8.1		8.1
	O2 ppm	9.0		8.7
	Cond.	368		366
	Temp(C)	20.0	20.0	20.5
6	pH	8.1		8.2
	O2 ppm	9.0		8.7
	Cond.	341		339
	Temp(C)	20.0	20.0	20.5
Control	pH	8.1		8.1
	O2 ppm	9.0		8.6
	Cond.	314		313
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900619

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1015

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900619

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.7		8.0
	Cond.	637		627
	Temp(C)	20.5	20.0	20.5
50	pH	8.1		8.1
	O2 ppm	9.0		8.3
	Cond.	470		465
	Temp(C)	20.5	20.0	20.5
25	pH	8.3		8.2
	O2 ppm	9.1		8.5
	Cond.	388		383
	Temp(C)	20.5	20.0	20.5
13	pH	8.3		8.2
	O2 ppm	9.1		8.5
	Cond.	348		346
	Temp(C)	20.5	20.0	20.5
6	pH	8.2		8.3
	O2 ppm	9.2		8.7
	Cond.	323		320
	Temp(C)	20.5	20.0	20.5
Control	pH	8.3		8.3
	O2 ppm	9.2		8.6
	Cond.	300		302
	Temp(C)	20.5	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900706

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1450

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900706

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	8.6		8.1
	Cond.	572		577
	Temp(C)	21.0	20.0	21.0
50	pH	8.2		8.2
	O2 ppm	8.7		8.3
	Cond.	438		442
	Temp(C)	21.0	20.0	21.0
25	pH	8.3		8.3
	O2 ppm	8.7		8.4
	Cond.	371		374
	Temp(C)	21.0	20.0	21.0
13	pH	8.3		8.4
	O2 ppm	8.7		8.5
	Cond.	337		339
	Temp(C)	21.0	20.0	21.0
6	pH	8.3		8.4
	O2 ppm	8.7		8.5
	Cond.	320		321
	Temp(C)	21.0	20.0	21.0
Control	pH	8.3		8.4
	O2 ppm	8.8		8.5
	Cond.	301		302
	Temp(C)	21.0	20.0	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900815

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/18/90 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900815

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.3		8.0
	O2 ppm	8.7		8.2
	Cond.	572		579
	Temp(C)	21.0	19.5	20.5
50	pH	8.4		8.2
	O2 ppm	8.8		8.4
	Cond.	435		439
	Temp(C)	21.0	19.5	20.5
25	pH	8.4		8.2
	O2 ppm	8.8		8.5
	Cond.	370		373
	Temp(C)	21.0	19.5	20.5
13	pH	8.5		8.2
	O2 ppm	8.9		8.6
	Cond.	337		340
	Temp(C)	21.0	19.5	20.5
6	pH	8.5		8.3
	O2 ppm	8.9		8.6
	Cond.	317		319
	Temp(C)	21.0	19.5	20.5
Control	pH	8.5		8.2
	O2 ppm	8.8		8.6
	Cond.	302		304
	Temp(C)	21.0	19.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900917

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : East Boat Slip Sewer, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/23/90 at: 1455

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900917

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.0		8.5
	Cond.	531		537
	Temp(C)	21.0	20.5	20.5
50	pH	8.3		8.2
	O2 ppm	9.0		8.6
	Cond.	417		418
	Temp(C)	21.0	20.5	20.5
25	pH	8.3		8.3
	O2 ppm	9.0		8.7
	Cond.	356		356
	Temp(C)	21.0	20.5	20.5
13	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	328		328
	Temp(C)	21.0	20.5	20.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.6
	Cond.	311		310
	Temp(C)	21.0	20.5	20.5
Control	pH	8.4		8.3
	O2 ppm	9.0		8.4
	Cond.	297		296
	Temp(C)	21.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890284

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: Ottawa Street Sewer, (200)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 11/20/89
Received	: 11/21/89
Tested	: 11/21/89 at: 1510
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890284

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	8.5			8.4
	O2 ppm	9.4			9.2
	Cond.	303			300
	Temp(C)	20.0	20.0	19.5	20.0
6	pH	8.6			8.4
	O2 ppm	9.3			9.4
	Cond.	328			328
	Temp(C)	20.0	20.0	19.5	20.0
13	pH	8.5			8.4
	O2 ppm	9.2			9.4
	Cond.	349			352
	Temp(C)	20.0	20.0	19.5	20.0
25	pH	8.4			8.3
	O2 ppm	[illegible]			9.2
	Cond.	[illegible]			389
	Temp(C)	20.0	20.0	19.5	20.0
50	pH	8.3			8.3
	O2 ppm	8.9			8.9
	Cond.	463			468
	Temp(C)	20.0	20.0	19.5	20.0
100	pH	8.2			8.1
	O2 ppm	8.8			8.6
	Cond.	641			629
	Temp(C)	20.0	20.0	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890332

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890332

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.9		8.1
	O2 ppm	9.7		8.8
	Cond.	632		624
	Temp(C)	19.5	20.0	19.5
50	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	469		463
	Temp(C)	19.5	20.0	19.5
25	pH	8.5		8.4
	O2 ppm	8.8		8.9
	Cond.	386		382
	Temp(C)	19.5	20.0	19.5
13	pH	8.6		8.4
	O2 ppm	8.8		8.9
	Cond.	347		346
	Temp(C)	19.5	20.0	19.5
6	pH	8.6		8.4
	O2 ppm	8.8		8.9
	Cond.	323		321
	Temp(C)	19.5	20.0	19.5
Control	pH	8.8		8.4
	O2 ppm	8.7		9.3
	Cond.	296		302
	Temp(C)	19.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890333

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	2	16
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890333

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	9.6		8.8
	Cond.	616		618
	Temp(C)	19.5	20.0	19.5
50	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	456		459
	Temp(C)	19.5	20.0	19.5
25	pH	8.5		8.4
	O2 ppm	8.7		9.0
	Cond.	373		381
	Temp(C)	19.5	20.0	19.5
13	pH	8.6		8.4
	O2 ppm	8.7		9.0
	Cond.	335		343
	Temp(C)	19.5	20.0	19.5
6	pH	8.6		8.4
	O2 ppm	8.8		9.0
	Cond.	318		327
	Temp(C)	19.5	20.0	19.5
Control	pH	8.8		8.4
	O2 ppm	8.7		9.3
	Cond.	296		302
	Temp(C)	19.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900057

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/22/90
Received : 01/23/90
Tested : 01/26/90 at: 1610

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	2	2	16
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900057

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.9		8.2
	O2 ppm	9.2		8.3
	Cond.	687		687
	Temp(C)	20.0	20.5	20.5
50	pH	8.2		8.4
	O2 ppm	8.9		8.3
	Cond.	495		491
	Temp(C)	20.0	20.5	20.5
25	pH	8.4		8.4
	O2 ppm	8.8		8.4
	Cond.	399		396
	Temp(C)	20.0	20.5	20.5
13	pH	8.4		8.5
	O2 ppm	8.7		8.3
	Cond.	354		349
	Temp(C)	20.0	20.5	20.5
6	pH	8.5		8.5
	O2 ppm	8.7		8.3
	Cond.	323		322
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		8.3
	Cond.	299		297
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900124

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/20/90 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900124

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.0		8.2
	Cond.	735		736
	Temp(C)	20.0	19.5	20.0
50	pH	8.4		8.3
	O2 ppm	8.8		8.4
	Cond.	525		523
	Temp(C)	20.0	19.5	20.0
25	pH	8.5		8.4
	O2 ppm	8.8		8.5
	Cond.	419		418
	Temp(C)	20.0	19.5	20.0
13	pH	8.5		8.4
	O2 ppm	8.7		8.5
	Cond.	367		364
	Temp(C)	20.0	19.5	20.0
6	pH	8.6		8.4
	O2 ppm	8.7		8.5
	Cond.	337		331
	Temp(C)	20.0	19.5	20.0
Control	pH	8.6		8.4
	O2 ppm	8.8		8.7
	Cond.	304		308
	Temp(C)	20.0	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900207

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1620

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900207

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.8		8.4
	Cond.	767		769
	Temp(C)	21.0	20.0	20.0
50	pH	8.3		8.1
	O2 ppm	8.7		8.4
	Cond.	539		540
	Temp(C)	21.0	20.0	20.0
25	pH	8.4		8.2
	O2 ppm	8.8		8.4
	Cond.	416		420
	Temp(C)	21.0	20.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.7		8.4
	Cond.	361		365
	Temp(C)	21.0	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.6		8.6
	Cond.	329		333
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.2
	O2 ppm	8.6		8.6
	Cond.	299		299
	Temp(C)	21.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900301

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ra
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900301

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.9		9.1
	Cond.	754		754
	Temp(C)	19.5	19.5	19.5
50	pH	8.2		8.2
	O2 ppm	9.0		9.1
	Cond.	527		527
	Temp(C)	19.5	19.5	19.5
25	pH	8.3		8.2
	O2 ppm	9.0		9.2
	Cond.	411		412
	Temp(C)	19.5	19.5	19.5
13	pH	8.3		8.3
	O2 ppm	9.0		9.1
	Cond.	356		356
	Temp(C)	19.5	19.5	19.5
6	pH	8.3		8.3
	O2 ppm	9.0		9.1
	Cond.	324		326
	Temp(C)	19.5	19.5	19.5
Control	pH	8.4		8.3
	O2 ppm	9.2		9.0
	Cond.	297		299
	Temp(C)	19.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900389

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 1015

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900389

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	8.2		8.9
	Cond.	750		753
	Temp(C)	20.0	19.0	19.0
50	pH	8.1		8.2
	O2 ppm	8.6		8.9
	Cond.	528		528
	Temp(C)	20.0	19.0	19.0
25	pH	8.1		8.3
	O2 ppm	8.7		8.8
	Cond.	411		411
	Temp(C)	20.0	19.0	19.0
13	pH	8.2		8.3
	O2 ppm	8.8		8.8
	Cond.	358		360
	Temp(C)	20.0	19.8	19.0
6	pH	8.2		8.3
	O2 ppm	8.8		8.9
	Cond.	327		324
	Temp(C)	20.0	19.0	19.0
Control	pH	8.3		8.3
	O2 ppm	8.7		8.9
	Cond.	294		303
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900107

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/12/90
Received : 06/13/90
Tested : 06/13/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal; Some Floaters

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900107

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	7.6					7.9
	O2 ppm	7.5					8.4
	Cond.	615					625
	Temp(C)	20.0					20.0
60	pH	7.7					7.9
	O2 ppm	8.3					8.4
	Cond.	490					495
	Temp(C)	20.0					20.0
30	pH	7.8					7.8
	O2 ppm	8.6					8.5
	Cond.	400					410
	Temp(C)	20.0					20.0
15	pH	7.8					7.8
	O2 ppm	8.7					8.4
	Cond.	350					360
	Temp(C)	20.0					20.0
5	pH	7.7					7.8
	O2 ppm	8.8					8.6
	Cond.	320					330
	Temp(C)	20.0					20.0
Control	pH	7.7					7.7
	O2 ppm	8.8					8.6
	Cond.	285					310
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900494

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900494

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	8.3		8.4
	Cond.	726		720
	Temp(C)	20.0	20.0	20.5
50	pH	8.0		8.0
	O2 ppm	8.8		8.6
	Cond.	522		519
	Temp(C)	20.0	20.0	20.5
25	pH	8.1		8.1
	O2 ppm	8.9		8.7
	Cond.	419		417
	Temp(C)	20.0	20.0	20.5
13	pH	8.1		8.1
	O2 ppm	8.9		8.7
	Cond.	368		366
	Temp(C)	20.0	20.0	20.5
6	pH	8.1		8.2
	O2 ppm	8.9		8.7
	Cond.	341		337
	Temp(C)	20.0	20.0	20.5
Control	pH	8.1		8.2
	O2 ppm	9.0		8.7
	Cond.	314		308
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900620

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1020

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
50	0	1	2	16
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900620

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	8.6		8.4
	Cond.	648		645
	Temp(C)	20.5	20.0	20.5
50	pH	8.1		8.1
	O2 ppm	8.9		8.5
	Cond.	473		475
	Temp(C)	20.5	20.0	20.5
25	pH	8.2		8.2
	O2 ppm	9.0		8.8
	Cond.	390		388
	Temp(C)	20.5	20.0	20.5
13	pH	8.3		8.2
	O2 ppm	9.0		8.7
	Cond.	349		348
	Temp(C)	20.5	20.0	20.5
6	pH	8.3		8.3
	O2 ppm	9.0		8.7
	Cond.	322		320
	Temp(C)	20.5	20.0	20.5
Control	pH	8.3		8.2
	O2 ppm	9.2		8.8
	Cond.	300		300
	Temp(C)	20.5	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900707

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900707

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.2		8.0
	Cond.	599		597
	Temp(C)	21.0	20.0	21.0
50	pH	8.2		8.2
	O2 ppm	8.6		8.3
	Cond.	451		450
	Temp(C)	21.0	20.0	21.0
25	pH	8.3		8.3
	O2 ppm	8.7		8.5
	Cond.	374		377
	Temp(C)	21.0	20.0	21.0
13	pH	8.3		8.3
	O2 ppm	8.7		8.5
	Cond.	339		342
	Temp(C)	21.0	20.0	21.0
6	pH	8.3		8.4
	O2 ppm	8.7		8.6
	Cond.	318		322
	Temp(C)	21.0	20.0	21.0
Control	pH	8.3		8.4
	O2 ppm	8.8		8.5
	Cond.	301		300
	Temp(C)	21.0	20.0	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900816

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/18/90 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900816

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.0
	O2 ppm	8.4		8.2
	Cond.	565		575
	Temp(C)	21.0	19.5	20.5
50	pH	8.4		8.2
	O2 ppm	8.7		8.5
	Cond.	431		437
	Temp(C)	21.0	19.5	20.5
25	pH	8.4		8.2
	O2 ppm	8.8		8.5
	Cond.	366		370
	Temp(C)	21.0	19.5	20.5
13	pH	8.4		8.2
	O2 ppm	8.8		8.6
	Cond.	332		338
	Temp(C)	21.0	19.5	20.5
6	pH	8.4		8.2
	O2 ppm	8.8		8.6
	Cond.	313		319
	Temp(C)	21.0	19.5	20.5
Control	pH	8.5		8.3
	O2 ppm	8.8		8.6
	Cond.	302		304
	Temp(C)	21.0	19.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900918

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Ottawa Street Sewer, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/23/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900918

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	8.6		8.4
	Cond.	548		552
	Temp(C)	20.5	20.5	20.5
50	pH	8.2		8.2
	O2 ppm	8.8		8.7
	Cond.	419		424
	Temp(C)	20.5	20.5	20.5
25	pH	8.3		8.3
	O2 ppm	8.9		8.8
	Cond.	359		361
	Temp(C)	20.5	20.5	20.5
13	pH	8.4		8.3
	O2 ppm	8.9		8.8
	Cond.	331		333
	Temp(C)	20.5	20.5	20.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	310		314
	Temp(C)	20.5	20.5	20.5
Control	pH	8.4		8.3
	O2 ppm	9.0		8.6
	Cond.	297		297
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900058

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/25/90 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	2	16
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900058

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.0		8.1
	Cond.	746		735
	Temp(C)	20.0	20.0	20.5
50	pH	8.3		8.3
	O2 ppm	8.9		8.1
	Cond.	527		522
	Temp(C)	20.0	20.0	20.5
25	pH	8.4		8.3
	O2 ppm	8.8		8.1
	Cond.	413		412
	Temp(C)	20.0	20.0	20.5
13	pH	8.4		8.4
	O2 ppm	8.8		8.0
	Cond.	360		359
	Temp(C)	20.0	20.0	20.5
6	pH	8.5		8.3
	O2 ppm	8.8		8.1
	Cond.	329		329
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.3
	O2 ppm	8.8		8.2
	Cond.	304		298
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900300

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	3	4	33
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900300

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	9.2		8.8
	Cond.	771		776
	Temp(C)	19.5	19.5	19.5
50	pH	8.2		8.2
	O2 ppm	9.1		8.9
	Cond.	537		540
	Temp(C)	19.5	19.5	19.5
25	pH	8.3		8.2
	O2 ppm	9.0		8.9
	Cond.	418		421
	Temp(C)	19.5	19.5	19.5
13	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	359		360
	Temp(C)	19.5	19.5	19.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	326		326
	Temp(C)	19.5	19.5	19.5
Control	pH	8.4		8.3
	O2 ppm	9.2		9.0
	Cond.	297		299
	Temp(C)	19.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900111

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900111

TEST CONC.		ELAPSED TIME	
%		00:00 01:00 02:00 04:00 24:00	48:00
100	pH	7.7	7.9
	O2 ppm	8.0	8.4
	Cond.	650	645
	Temp(C)	20.0	20.0
60	pH	7.8	7.9
	O2 ppm	8.6	8.5
	Cond.	525	535
	Temp(C)	20.0	20.0
30	pH	7.9	7.9
	O2 ppm	8.8	8.6
	Cond.	415	420
	Temp(C)	20.0	20.0
15	pH	7.9	7.9
	O2 ppm	8.8	8.5
	Cond.	360	370
	Temp(C)	20.0	20.0
5	pH	7.9	7.9
	O2 ppm	8.8	8.6
	Cond.	320	335
	Temp(C)	20.0	20.0
Control	pH	7.9	7.8
	O2 ppm	8.8	8.6
	Cond.	285	305
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900130

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/26/90
Received : 06/28/90
Tested : 06/28/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900130

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	7.4					8.1
	O2 ppm	6.6					9.6
	Cond.	650					650
	Temp(C)	20.0					20.0
60	pH	7.6					7.9
	O2 ppm	8.1					9.3
	Cond.	520					520
	Temp(C)	20.0					20.0
30	pH	7.7					7.9
	O2 ppm	8.6					9.0
	Cond.	410					415
	Temp(C)	20.0					20.0
15	pH	7.8					7.9
	O2 ppm	8.8					8.9
	Cond.	355					375
	Temp(C)	20.0					20.0
5	pH	7.8					7.8
	O2 ppm	8.9					8.9
	Cond.	330					335
	Temp(C)	20.0					20.0
Control	pH	7.8					7.8
	O2 ppm	8.9					8.9
	Cond.	305					310
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900621

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1050

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	4	33
50	0	1	1	8
25	0	0	0	0
13	0	2	4	33
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900621

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	8.9		8.4
	Cond.	625		629
	Temp(C)	20.5	20.0	20.5
50	pH	8.2		8.2
	O2 ppm	9.0		8.6
	Cond.	464		464
	Temp(C)	20.5	20.0	20.5
25	pH	8.2		8.2
	O2 ppm	9.0		8.6
	Cond.	383		384
	Temp(C)	20.5	20.0	20.5
13	pH	8.3		8.3
	O2 ppm	9.0		8.8
	Cond.	344		346
	Temp(C)	20.5	20.0	20.5
6	pH	8.3		8.3
	O2 ppm	9.0		8.8
	Cond.	318		321
	Temp(C)	20.5	20.0	20.5
Control	pH	8.3		8.2
	O2 ppm	9.2		8.8
	Cond.	300		301
	Temp(C)	20.5	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900919

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #1, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/24/90 at: 1140

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900919

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.1		8.5
	Cond.	542		550
	Temp(C)	20.5	20.5	20.0
50	pH	8.1		8.2
	O2 ppm	9.1		8.7
	Cond.	420		425
	Temp(C)	20.5	20.5	20.0
25	pH	8.2		8.3
	O2 ppm	9.1		8.8
	Cond.	364		366
	Temp(C)	20.5	20.5	20.0
13	pH	8.2		8.3
	O2 ppm	9.1		8.9
	Cond.	335		336
	Temp(C)	20.5	20.5	20.0
6	pH	8.3		8.3
	O2 ppm	9.1		8.9
	Cond.	316		318
	Temp(C)	20.5	20.5	20.0
Control	pH	8.3		8.3
	O2 ppm	9.1		8.9
	Cond.	301		303
	Temp(C)	20.5	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890283

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 11/20/89
Received : 11/21/89
Tested : 11/23/89 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890283

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	8.5			8.5
	O2 ppm	8.6			9.2
	Cond.	298			303
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.3
	O2 ppm	8.6			9.3
	Cond.	321			322
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.4			9.3
	Cond.	342			342
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.4			9.3
	Cond.	379			380
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.4			8.2
	O2 ppm	8.5			9.1
	Cond.	459			457
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.4			8.1
	O2 ppm	8.7			8.9
	Cond.	614			611
	Temp(C)	20.0	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890330

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	1	8
6	0	0	2	16
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890330

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	8.3		8.4
	Cond.	661		683
	Temp(C)	19.5	20.0	19.5
50	pH	8.3		8.2
	O2 ppm	8.5		8.8
	Cond.	483		494
	Temp(C)	19.5	20.0	19.5
25	pH	8.5		8.3
	O2 ppm	8.6		8.9
	Cond.	383		394
	Temp(C)	19.5	20.0	19.5
13	pH	8.6		8.4
	O2 ppm	8.6		8.9
	Cond.	342		356
	Temp(C)	19.5	20.0	19.5
6	pH	8.6		8.4
	O2 ppm	8.8		8.8
	Cond.	318		326
	Temp(C)	19.5	20.0	19.5
Control	pH	8.8		8.4
	O2 ppm	8.7		9.6
	Cond.	296		302
	Temp(C)	19.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900056

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: West Bay Front Sewer, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Ha
Date Collected	: 01/23/90
Received	: 01/23/90
Tested	: 01/26/90 at: 1605
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	1	2	16
25	0	0	0	0
13	0	1	1	8
6	0	1	2	16
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900056

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		8.1
	O2 ppm	9.2		8.3
	Cond.	742		743
	Temp(C)	20.0	20.5	20.5
50	pH	8.1		8.3
	O2 ppm	9.2		8.4
	Cond.	528		523
	Temp(C)	20.0	20.5	20.5
25	pH	8.3		8.4
	O2 ppm	9.2		8.4
	Cond.	417		412
	Temp(C)	20.0	20.5	20.5
13	pH	8.4		8.5
	O2 ppm	9.2		8.5
	Cond.	364		360
	Temp(C)	20.0	20.5	20.5
6	pH	8.5		8.5
	O2 ppm	9.2		8.5
	Cond.	333		329
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		8.3
	Cond.	299		297
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900125

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/20/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900125

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		8.0
	O2 ppm	8.9		8.2
	Cond.	762		775
	Temp(C)	20.0	19.5	20.0
50	pH	8.2		8.2
	O2 ppm	8.8		8.5
	Cond.	540		542
	Temp(C)	20.0	19.5	20.0
25	pH	8.4		8.3
	O2 ppm	8.8		8.6
	Cond.	426		428
	Temp(C)	20.0	19.5	20.0
13	pH	8.5		8.4
	O2 ppm	8.7		8.6
	Cond.	370		369
	Temp(C)	20.0	19.5	20.0
6	pH	8.5		8.4
	O2 ppm	8.7		8.6
	Cond.	337		335
	Temp(C)	20.0	19.5	20.0
Control	pH	8.6		8.4
	O2 ppm	8.8		8.5
	Cond.	304		308
	Temp(C)	20.0	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900208

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: West Bay Front Sewer, (400)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Spong
Date Collected	: 03/19/90
Received	: 03/20/90
Tested	: 03/20/90 at: 1625
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900208

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	9.1		8.4
	Cond.	801		796
	Temp(C)	21.0	20.0	20.0
50	pH	8.2		8.1
	O2 ppm	8.9		8.5
	Cond.	549		552
	Temp(C)	21.0	20.0	20.0
25	pH	8.4		8.2
	O2 ppm	8.8		8.5
	Cond.	426		428
	Temp(C)	21.0	20.0	20.0
13	pH	8.4		8.2
	O2 ppm	8.8		8.5
	Cond.	366		368
	Temp(C)	21.0	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.7		8.5
	Cond.	331		333
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.6		8.5
	Cond.	299		296
	Temp(C)	21.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT **Sample: 03900299**

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/17/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900299

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.8		8.3
	O2 ppm	9.2		9.0
	Cond.	784		798
	Temp(C)	19.5	19.5	19.5
50	pH	8.6		8.3
	O2 ppm	9.1		9.1
	Cond.	546		552
	Temp(C)	19.5	19.5	19.5
25	pH	8.4		8.3
	O2 ppm	9.1		9.1
	Cond.	422		425
	Temp(C)	19.5	19.5	19.5
13	pH	8.4		8.3
	O2 ppm	9.1		9.1
	Cond.	364		365
	Temp(C)	19.5	19.5	19.5
6	pH	8.4		8.3
	O2 ppm	9.2		9.0
	Cond.	327		328
	Temp(C)	19.5	19.5	19.5
Control	pH	8.4		8.3
	O2 ppm	9.2		8.9
	Cond.	297		297
	Temp(C)	19.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900390

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900390

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	7.7		8.7
	Cond.	822		822
	Temp(C)	20.0	19.0	19.0
50	pH	8.1		8.2
	O2 ppm	8.5		8.8
	Cond.	557		558
	Temp(C)	20.0	19.0	19.0
25	pH	8.2		8.3
	O2 ppm	8.7		9.1
	Cond.	428		428
	Temp(C)	20.0	19.8	19.0
13	pH	8.2		8.3
	O2 ppm	8.7		9.0
	Cond.	366		366
	Temp(C)	20.0	19.0	19.0
6	pH	8.2		8.3
	O2 ppm	8.7		8.8
	Cond.	330		328
	Temp(C)	20.0	19.0	19.0
Control	pH	8.3		8.3
	O2 ppm	8.7		8.9
	Cond.	294		296
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900112

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	1	8
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900112

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	8.2	8.1
	O2 ppm	7.7	8.5
	Cond.	720	710
	Temp(C)	20.0	20.0
60	pH	8.1	8.0
	O2 ppm	8.5	8.7
	Cond.	560	545
	Temp(C)	20.0	20.0
30	pH	8.0	7.9
	O2 ppm	8.7	8.7
	Cond.	425	445
	Temp(C)	20.0	20.0
15	pH	8.0	8.0
	O2 ppm	8.8	8.6
	Cond.	365	370
	Temp(C)	20.0	20.0
5	pH	8.0	8.0
	O2 ppm	8.8	8.6
	Cond.	315	330
	Temp(C)	20.0	20.0
Control	pH	7.9	8.0
	O2 ppm	8.8	8.5
	Cond.	270	265
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900495

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900495

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.6		8.1
	O2 ppm	8.3		8.3
	Cond.	761		765
	Temp(C)	20.0	20.0	20.5
50	pH	8.4		8.2
	O2 ppm	8.7		8.6
	Cond.	540		543
	Temp(C)	20.0	20.0	20.5
25	pH	8.2		8.1
	O2 ppm	8.9		8.8
	Cond.	428		430
	Temp(C)	20.0	20.0	20.5
13	pH	8.2		8.2
	O2 ppm	8.9		8.8
	Cond.	372		373
	Temp(C)	20.0	20.0	20.5
6	pH	8.2		8.2
	O2 ppm	8.9		8.8
	Cond.	341		341
	Temp(C)	20.0	20.0	20.5
Control	pH	8.1		8.2
	O2 ppm	9.0		8.7
	Cond.	314		307
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900622

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1120

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900622

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.6		8.1
	O2 ppm	8.3		8.3
	Cond.	703		703
	Temp(C)	20.5	20.0	21.0
50	pH	8.4		8.2
	O2 ppm	8.8		8.5
	Cond.	505		500
	Temp(C)	20.5	20.0	21.0
25	pH	8.3		8.2
	O2 ppm	8.9		8.6
	Cond.	403		398
	Temp(C)	20.5	20.0	21.0
13	pH	8.3		8.3
	O2 ppm	9.0		8.7
	Cond.	358		354
	Temp(C)	20.5	20.0	21.0
6	pH	8.3		8.3
	O2 ppm	9.1		8.8
	Cond.	325		326
	Temp(C)	20.5	20.0	21.0
Control	pH	8.3		8.3
	O2 ppm	9.2		8.8
	Cond.	300		301
	Temp(C)	20.5	20.0	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900708

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1555

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900708

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	9.6		9.0
	O2 ppm	8.6		8.2
	Cond.	637		657
	Temp(C)	21.0	20.5	21.0
50	pH	9.0		8.8
	O2 ppm	8.7		8.4
	Cond.	471		481
	Temp(C)	21.0	20.5	21.0
25	pH	8.7		8.6
	O2 ppm	8.7		8.5
	Cond.	373		379
	Temp(C)	21.0	20.5	21.0
13	pH	8.6		8.5
	O2 ppm	8.7		8.6
	Cond.	344		350
	Temp(C)	21.0	20.5	21.0
6	pH	8.5		8.4
	O2 ppm	8.7		8.6
	Cond.	321		326
	Temp(C)	21.0	20.5	21.0
Control	pH	8.3		8.3
	O2 ppm	8.8		8.6
	Cond.	301		300
	Temp(C)	21.0	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900817

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/18/90 at: 1540

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900817

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	9.2		8.4
	O2 ppm	8.6		8.1
	Cond.	627		646
	Temp(C)	21.0	19.5	20.5
50	pH	8.9		8.3
	O2 ppm	8.9		8.3
	Cond.	464		476
	Temp(C)	21.0	19.5	20.5
25	pH	8.7		8.3
	O2 ppm	8.9		8.4
	Cond.	379		388
	Temp(C)	21.0	19.5	20.5
13	pH	8.6		8.3
	O2 ppm	8.9		8.5
	Cond.	341		348
	Temp(C)	21.0	19.5	20.5
6	pH	8.5		8.3
	O2 ppm	8.8		8.5
	Cond.	318		325
	Temp(C)	21.0	19.5	20.5
Control	pH	8.5		8.3
	O2 ppm	8.8		8.6
	Cond.	302		304
	Temp(C)	21.0	19.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900920

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : West Bay Front Sewer, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/24/90 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900920

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	9.2		8.5
	O2 ppm	9.1		8.8
	Cond.	612		627
	Temp(C)	20.5	20.5	20.0
50	pH	8.8		8.4
	O2 ppm	9.1		8.9
	Cond.	458		465
	Temp(C)	20.5	20.5	20.0
25	pH	8.5		8.3
	O2 ppm	9.1		9.0
	Cond.	379		385
	Temp(C)	20.5	20.5	20.0
13	pH	8.4		8.3
	O2 ppm	9.1		9.0
	Cond.	343		347
	Temp(C)	20.5	20.5	20.0
6	pH	8.3		8.3
	O2 ppm	9.1		9.0
	Cond.	318		322
	Temp(C)	20.5	20.5	20.0
Control	pH	8.3		8.3
	O2 ppm	9.1		8.9
	Cond.	301		303
	Temp(C)	20.5	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890282

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 11/20/89
Received : 11/21/89
Tested : 11/23/89 at: 1400

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890282

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	8.5			8.4
	O2 ppm	8.6			9.2
	Cond.	298			297
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.3
	O2 ppm	8.6			9.2
	Cond.	323			313
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.6			9.3
	Cond.	340			330
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.5			9.2
	Cond.	370			360
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.3			8.2
	O2 ppm	8.6			9.1
	Cond.	433			421
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.0			8.1
	O2 ppm	8.8			8.9
	Cond.	563			543
	Temp(C)	20.0	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890331

TEST CONDITIONS

Company	: Dofasco Hamilton, ONT (1460005)
Region	: West Central
Industry	: Iron and Steel
Control point	: Bay Water Intake, (500)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Spong
Date Collected	: 12/12/89
Received	: 12/12/89
Tested	: 12/13/89 at: 1055
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890331

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.8		8.7
	Cond.	602		602
	Temp(C)	19.5	20.0	19.5
50	pH	8.4		8.3
	O2 ppm	9.1		8.9
	Cond.	454		454
	Temp(C)	19.5	20.0	19.5
25	pH	8.6		8.3
	O2 ppm	8.8		8.9
	Cond.	378		380
	Temp(C)	19.5	20.0	19.5
13	pH	8.6		8.4
	O2 ppm	8.7		9.0
	Cond.	343		343
	Temp(C)	19.5	20.0	19.5
6	pH	8.6		8.4
	O2 ppm	8.6		9.0
	Cond.	324		320
	Temp(C)	19.5	20.0	19.5
Control	pH	8.8		8.4
	O2 ppm	8.7		9.4
	Cond.	296		303
	Temp(C)	19.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900059

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460U05)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/25/90 at: 1440

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	1	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits :. 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900059

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.2		8.4
	Cond.	739		733
	Temp(C)	20.0	20.0	20.5
50	pH	8.2		8.3
	O2 ppm	9.0		8.4
	Cond.	520		513
	Temp(C)	20.0	20.0	20.5
25	pH	8.4		8.3
	O2 ppm	8.9		8.4
	Cond.	414		410
	Temp(C)	20.0	20.0	20.5
13	pH	8.4		8.4
	O2 ppm	8.8		8.4
	Cond.	363		357
	Temp(C)	20.0	20.0	20.5
6	pH	8.5		8.4
	O2 ppm	8.8		8.4
	Cond.	329		327
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.4
	O2 ppm	8.8		8.4
	Cond.	304		299
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900126

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/20/90 at: 1520

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900126

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.1		8.4
	Cond.	694		704
	Temp(C)	20.0	19.5	20.0
50	pH	8.4		8.3
	O2 ppm	9.0		8.6
	Cond.	503		508
	Temp(C)	20.0	19.5	20.0
25	pH	8.5		8.4
	O2 ppm	9.0		8.6
	Cond.	411		411
	Temp(C)	20.0	19.5	20.0
13	pH	8.5		8.4
	O2 ppm	8.8		8.6
	Cond.	360		361
	Temp(C)	20.0	19.5	20.0
6	pH	8.6		8.4
	O2 ppm	8.8		8.6
	Cond.	332		330
	Temp(C)	20.0	19.5	20.0
Control	pH	8.6		8.5
	O2 ppm	8.8		8.4
	Cond.	304		305
	Temp(C)	20.0	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900205

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	1	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900205

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.4		8.1
	O2 ppm	8.7		8.5
	Cond.	740		733
	Temp(C)	21.0	20.0	20.0
50	pH	8.4		8.2
	O2 ppm	8.5		8.5
	Cond.	522		517
	Temp(C)	21.0	20.0	20.0
25	pH	8.4		8.2
	O2 ppm	8.5		8.6
	Cond.	410		409
	Temp(C)	21.0	20.0	20.0
13	pH	8.4		8.2
	O2 ppm	8.5		8.6
	Cond.	357		358
	Temp(C)	21.0	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.4		8.5
	Cond.	327		327
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.6		8.5
	Cond.	299		296
	Temp(C)	21.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900298

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/18/90 at: 930

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900298

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	8.9		9.1
	Cond.	744		751
	Temp(C)	19.0	20.0	19.5
50	pH	8.2		8.2
	O2 ppm	8.9		9.1
	Cond.	532		536
	Temp(C)	19.0	20.0	19.5
25	pH	8.3		8.3
	O2 ppm	8.9		9.0
	Cond.	419		421
	Temp(C)	19.0	20.0	19.5
13	pH	8.3		8.3
	O2 ppm	8.9		9.0
	Cond.	363		364
	Temp(C)	19.0	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	334		334
	Temp(C)	19.0	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	8.9		8.5
	Cond.	302		305
	Temp(C)	19.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900391

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Spong
Date Collected : 05/14/90
Received : 05/15/90
Tested : 05/16/90 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900391

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.0		9.2
	Cond.	723		731
	Temp(C)	20.0	19.0	19.0
50	pH	8.2		8.3
	O2 ppm	8.9		9.1
	Cond.	510		514
	Temp(C)	20.0	19.0	19.0
25	pH	8.2		8.3
	O2 ppm	8.9		9.1
	Cond.	404		405
	Temp(C)	20.0	19.0	19.0
13	pH	8.2		8.3
	O2 ppm	8.8		9.1
	Cond.	352		353
	Temp(C)	20.0	19.0	19.0
6	pH	8.2		8.3
	O2 ppm	8.7		9.0
	Cond.	328		329
	Temp(C)	20.0	19.0	19.0
Control	pH	8.3		8.3
	O2 ppm	8.7		8.9
	Cond.	294		299
	Temp(C)	20.0	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900496

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 06/18/90
Received : 06/19/90
Tested : 06/20/90 at: 1120

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900496

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	8.6		8.5
	Cond.	716		717
	Temp(C)	20.0	20.0	20.5
50	pH	7.9		8.0
	O2 ppm	8.9		8.6
	Cond.	516		517
	Temp(C)	20.0	20.0	20.5
25	pH	8.0		8.1
	O2 ppm	9.0		8.7
	Cond.	411		412
	Temp(C)	20.0	20.0	20.5
13	pH	8.1		8.1
	O2 ppm	9.0		8.7
	Cond.	365		365
	Temp(C)	20.0	20.0	20.5
6	pH	8.1		8.1
	O2 ppm	8.9		8.7
	Cond.	337		336
	Temp(C)	20.0	20.0	20.5
Control	pH	8.1		8.2
	O2 ppm	9.0		8.6
	Cond.	314		305
	Temp(C)	20.0	20.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900623

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1350

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900623

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	9.1		8.0
	Cond.	619		620
	Temp(C)	21.0	20.5	21.0
50	pH	8.1		8.1
	O2 ppm	9.1		8.2
	Cond.	460		460
	Temp(C)	21.0	20.5	21.0
25	pH	8.2		8.2
	O2 ppm	9.1		8.4
	Cond.	380		380
	Temp(C)	21.0	20.5	21.0
13	pH	8.1		8.2
	O2 ppm	9.1		8.4
	Cond.	344		344
	Temp(C)	21.0	20.5	21.0
6	pH	8.2		8.2
	O2 ppm	9.2		8.6
	Cond.	317		322
	Temp(C)	21.0	20.5	21.0
Control	pH	8.3		8.3
	O2 ppm	9.2		8.3
	Cond.	300		302
	Temp(C)	21.0	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900709

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 08/20/90
Received : 08/21/90
Tested : 08/21/90 at: 1620

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900709

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	9.6		9.1
	O2 ppm	8.6		8.2
	Cond.	640		656
	Temp(C)	21.0	20.5	21.0
50	pH	9.0		8.7
	O2 ppm	8.7		8.3
	Cond.	470		479
	Temp(C)	21.0	20.5	21.0
25	pH	8.8		8.6
	O2 ppm	8.8		8.4
	Cond.	387		394
	Temp(C)	21.0	20.5	21.0
13	pH	8.5		8.5
	O2 ppm	8.7		8.5
	Cond.	349		350
	Temp(C)	21.0	20.5	21.0
6	pH	8.4		8.4
	O2 ppm	8.7		8.5
	Cond.	320		324
	Temp(C)	21.0	20.5	21.0
Control	pH	8.3		8.4
	O2 ppm	8.8		8.7
	Cond.	301		303
	Temp(C)	21.0	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900818

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 09/17/90
Received : 09/18/90
Tested : 09/18/90 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900818

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.0
	O2 ppm	8.8		8.3
	Cond.	552		565
	Temp(C)	21.0	19.5	20.5
50	pH	8.3		8.2
	O2 ppm	8.9		8.4
	Cond.	425		431
	Temp(C)	21.0	19.5	20.5
25	pH	8.4		8.2
	O2 ppm	8.9		8.4
	Cond.	363		367
	Temp(C)	21.0	19.5	20.5
13	pH	8.5		8.3
	O2 ppm	8.9		8.5
	Cond.	332		336
	Temp(C)	21.0	19.5	20.5
6	pH	8.4		8.3
	O2 ppm	8.8		8.5
	Cond.	315		320
	Temp(C)	21.0	19.5	20.5
Control	pH	8.5		8.3
	O2 ppm	8.8		8.5
	Cond.	302		304
	Temp(C)	21.0	19.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900921

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Bay Water Intake, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/23/90 at: 1520

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900921

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.1		8.4
	Cond.	521		535
	Temp(C)	20.5	20.5	20.5
50	pH	8.2		8.2
	O2 ppm	9.1		8.6
	Cond.	410		416
	Temp(C)	20.5	20.5	20.5
25	pH	8.3		8.3
	O2 ppm	9.0		8.7
	Cond.	350		355
	Temp(C)	20.5	20.5	20.5
13	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	325		329
	Temp(C)	20.5	20.5	20.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	310		312
	Temp(C)	20.5	20.5	20.5
Control	pH	8.4		8.3
	O2 ppm	9.0		8.7
	Cond.	297		297
	Temp(C)	20.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900060

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 01/23/90
Received : 01/23/90
Tested : 01/26/90 at: 1625

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900060

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.0		8.2
	Cond.	642		637
	Temp(C)	20.0	20.5	20.5
50	pH	8.3		8.4
	O2 ppm	8.8		8.1
	Cond.	476		472
	Temp(C)	20.0	20.5	20.5
25	pH	8.4		8.4
	O2 ppm	8.7		8.1
	Cond.	388		387
	Temp(C)	20.0	20.5	20.5
13	pH	8.4		8.5
	O2 ppm	8.7		8.1
	Cond.	349		346
	Temp(C)	20.0	20.5	20.5
6	pH	8.5		8.5
	O2 ppm	8.7		8.1
	Cond.	325		325
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.5
	O2 ppm	8.8		8.2
	Cond.	299		305
	Temp(C)	20.0	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900303

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 04/16/90
Received : 04/17/90
Tested : 04/18/90 at: 950

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900303

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.3		8.2
	O2 ppm	9.0		8.8
	Cond.	758		760
	Temp(C)	19.0	20.0	19.5
50	pH	8.2		8.2
	O2 ppm	9.0		8.8
	Cond.	521		523
	Temp(C)	19.0	20.0	19.5
25	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	410		412
	Temp(C)	19.0	20.0	19.5
13	pH	8.4		8.3
	O2 ppm	8.9		8.9
	Cond.	361		363
	Temp(C)	19.0	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	331		334
	Temp(C)	19.0	20.0	19.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.8
	Cond.	302		306
	Temp(C)	19.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900110

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 06/13/90
Received : 06/14/90
Tested : 06/15/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900110

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	7.8					8.0
	O2 ppm	8.2					8.5
	Cond.	630					640
	Temp(C)	20.0					20.0
60	pH	7.8					8.0
	O2 ppm	8.7					8.5
	Cond.	500					500
	Temp(C)	20.0					20.0
30	pH	7.9					7.9
	O2 ppm	8.8					8.5
	Cond.	410					415
	Temp(C)	20.0					20.0
15	pH	7.9					7.9
	O2 ppm	8.8					8.6
	Cond.	355					365
	Temp(C)	20.0					20.0
5	pH	7.9					7.9
	O2 ppm	8.8					8.5
	Cond.	320					325
	Temp(C)	20.0					20.0
Control	pH	7.8					7.9
	O2 ppm	8.7					8.5
	Cond.	285					290
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900624

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ma
Date Collected : 07/23/90
Received : 07/24/90
Tested : 07/25/90 at: 1355

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	2	2	16
6	0	1	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900624

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.9		7.9
	Cond.	610		625
	Temp(C)	21.0	20.5	21.0
50	pH	8.1		8.1
	O2 ppm	9.0		8.2
	Cond.	459		462
	Temp(C)	21.0	20.5	21.0
25	pH	8.2		8.2
	O2 ppm	9.0		8.4
	Cond.	378		380
	Temp(C)	21.0	20.5	21.0
13	pH	8.2		8.2
	O2 ppm	9.1		8.4
	Cond.	341		345
	Temp(C)	21.0	20.5	21.0
6	pH	8.3		8.3
	O2 ppm	9.0		8.4
	Cond.	314		322
	Temp(C)	21.0	20.5	21.0
Control	pH	8.3		8.3
	O2 ppm	9.2		8.3
	Cond.	300		302
	Temp(C)	21.0	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900922

TEST CONDITIONS

Company : Dofasco
Hamilton, ONT
(1460005)
Region : West Central
Industry : Iron and Steel

Control point : Boiler House Sewer #2, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Ha
Date Collected : 10/22/90
Received : 10/23/90
Tested : 10/24/90 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900922

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.1		8.9
	Cond.	533		537
	Temp(C)	20.5	20.5	20.0
50	pH	8.2		8.2
	O2 ppm	9.0		9.0
	Cond.	419		422
	Temp(C)	20.5	20.5	20.0
25	pH	8.2		8.2
	O2 ppm	9.0		9.0
	Cond.	360		357
	Temp(C)	20.5	20.5	20.0
13	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	331		328
	Temp(C)	20.5	20.5	20.0
6	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	313		315
	Temp(C)	20.5	20.5	20.0
Control	pH	8.3		8.3
	O2 ppm	9.1		8.9
	Cond.	301		304
	Temp(C)	20.5	20.5	20.0

COMPANY: Ivaco Rolling Mills, L'Original (19720408)
SECTOR: Iron and Steel
REGION: Southeast

SUMMARY
The data for three acute lethality trout bioassays conducted on effluent samples collected between November 1989 and July 1990 were submitted by Ivaco Rolling Mills. All three samples, including the Ministry audit sample, collected from the East Discharge Cooling Water effluent,were determined to have been nonlethal to test fish. The single sample of East Discharge FE effluent was also nonlethal.

East Discharge FE

06900115 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

East Discharge CW

11900001 sampled: 04/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Tap filtered through charcoal and uv.

01900102 sampled: 06/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

11900035 sampled: 07/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Tap through charcoal and UV

Northeast Discharge

Southeast Discharge

Mill Pond Outlet

Rain Gauge

Intake Water

MISA Trout

TOXICITY TEST REPORT Sample: 06900115

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge FE, (100)

Laboratory : BEAK
Sampling Method : GRAB
Sampled By : BILL BRADLEY
Date Collected : 01/15/90
Received : 01/17/90
Tested : 01/18/90 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900115

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
Control	pH	7.4	7.7	7.8	7.6	8.1
	O2 ppm	9.2	8.4	8.5	8.2	8.8
	Cond.	365				388
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.7	7.9	8.1	8.0	8.2
	O2 ppm	9.4	8.7	8.6	8.2	8.9
	Cond.	549				516
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	8.1	7.9	8.1	8.0	8.1
	O2 ppm	10.1	7.9	8.5	8.4	8.2
	Cond.	619				648
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.4	8.0	7.9	7.9	8.0
	O2 ppm	9.4	8.1	8.2	8.2	8.5
	Cond.	760				776
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.8	8.2	8.0	7.9	8.1
	O2 ppm	9.3	8.6	8.0	8.4	8.7
	Cond.	1012				1051
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	9.0	8.1	8.1	8.1	8.2
	O2 ppm	9.9	9.8	8.6	8.8	8.8
	Cond.	1204				1247
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	9.3	8.5	8.1	8.1	8.2
	O2 ppm	9.0	8.9	9.1	8.6	8.4
	Cond.	1629				1710
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 11900001

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge CW, (200)

Laboratory : Paracel Lb
Sampling Method : Grab
Sampled By : B. Bradley
Date Collected : 04/09/90
Received : 04/09/90
Tested : 04/12/90 at: 1030

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Tap filtered through charcoal and uv.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 11900001

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	9.7							8.1
	O2 ppm	8.6							9.7
	Cond.	3288							3110
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
80	pH	9.6							8.0
	O2 ppm	9.0							9.5
	Cond.	2647							2469
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
40	pH	9.4							7.8
	O2 ppm	9.5							9.3
	Cond.	1492							1369
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
20	pH	8.9							7.7
	O2 ppm	9.5							9.4
	Cond.	790							717
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
10	pH	8.3							7.6
	O2 ppm	9.6							9.6
	Cond.	483							432
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
5	pH	7.8							7.6
	O2 ppm	9.6							9.5
	Cond.	318							280
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Control	pH	7.5							7.5
	O2 ppm	9.5							9.8
	Cond.	180							141
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900102

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge CW, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : P. Taylor
Date Collected : 06/04/90
Received : 06/06/90
Tested : 06/07/90 at: 1300

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	00:30	01:00	24:00	46:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900102

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	24:00	46:00	72:00	96:00
100	pH	9.3	9.6	8.2	7.9	8.0	8.0	
	O2 ppm	8.4	8.7	9.3	9.1	9.5	9.7	
	Cond.	2160	2750	2750	2770	2800	2750	
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	
65	pH		8.8	7.9	7.9	8.0	8.0	
	O2 ppm		9.1	9.6	9.3	9.7	9.9	
	Cond.		1870	1900	1900	1900	1900	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
40	pH		8.5	7.8	7.8	7.9	7.9	
	O2 ppm		8.6	9.6	9.3	9.5	9.8	
	Cond.		1280	1280	1290	1290	1270	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
30	pH		8.3	7.8	7.8	7.9	7.8	
	O2 ppm		9.0	9.6	9.3	9.6	9.8	
	Cond.		1020	1020	1030	1030	1020	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
20	pH		8.0	7.8	7.8	7.8	7.8	
	O2 ppm		9.1	9.6	9.2	9.6	9.9	
	Cond.		780	780	780	790	780	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
10	pH		7.8	7.8	7.8	7.8	7.8	
	O2 ppm		9.1	9.6	9.3	9.6	9.9	
	Cond.		540	540	540	540	540	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
Control	pH		7.7	7.9	7.8	7.7	7.7	
	O2 ppm		9.3	9.6	9.1	9.7	9.9	
	Cond.		210	260	260	260	255	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	

MISA Trout

TOXICITY TEST REPORT Sample: 11900035

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge CW, (200)

Laboratory : Paracel Lb
Sampling Method : single grab
Sampled By : B.Bradley
Date Collected : 07/10/90
Received : 07/10/90
Tested : 07/12/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	96:00	TOTAL MORTALITY %
100	0	0	0
80	0	0	0
40	0	0	0
20	0	0	0
10	0	0	0
5	0	0	0
Control	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Tap through charcoal and UV

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 11900035

TEST CONC. %		ELAPSED TIME 00:00	96:00
100	pH	9.4	7.9
	O2 ppm	8.2	8.4
	Cond.	745	706
	Temp(C)	15.0	15.0
80	pH	9.2	7.9
	O2 ppm	8.9	8.4
	Cond.	621	598
	Temp(C)	15.0	15.0
40	pH	8.6	7.8
	O2 ppm	8.9	8.6
	Cond.	359	353
	Temp(C)	15.0	15.0
20	pH	8.2	7.7
	O2 ppm	8.8	8.4
	Cond.	234	231
	Temp(C)	15.0	15.0
10	pH	7.8	7.5
	O2 ppm	8.9	7.6
	Cond.	164	169
	Temp(C)	15.0	15.0
5	pH	7.7	7.5
	O2 ppm	8.7	8.1
	Cond.	135	144
	Temp(C)	15.0	15.0
Control	pH	7.6	7.6
	O2 ppm	8.7	8.8
	Cond.	98	103
	Temp(C)	15.0	15.0

COMPANY: Ivaco Rolling Mills, L'Original (19720408)
SECTOR: Iron and Steel
REGION: Southeast

SUMMARY

Data for three Daphnia magna acute lethality toxicity tests conducted on samples of effluent from east discharges (100 and 200) collected between November 1989 and April 1990 were submitted by Ivaco Rolling Mills of L'Orignal. The sample from the east discharge process effluent taken in January was toxic to Daphnia with a 48 h LC50 = 80.6%. The sample from the east discharge cooling water collected in April was not acutely lethal to Daphnia. The data submitted for the July sample was returned for resubmission and has not yet been resubmitted. A Ministry audit sample tested in June had an LC50 > 100 %.

East Discharge FE

06900116 sampled: 01/15/90 LC50: 80.6 %
95% fid. limits: 65.0 - 100.0 %
comments: 100% MORTALITY IN FULL STRENGTH EFFLUENT

East Discharge CW

11900006 sampled: 04/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02900102 sampled: 06/04/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Many Floaters; Very High Cond.

11900035 sampled: 07/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Northeast Discharge

Southeast Discharge

Mill Pond Outlet

Rain Gauge

Intake Water

MISA Daphnia

TOXICITY TEST REPORT Sample: 06900116

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge FE, (100)

Laboratory : BEAK
Sampling Method : GRAB
Sampled By : BILL BRADLEY
Date Collected : 01/15/90
Received : 01/17/90
Tested : 01/18/90 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	10	100

48 Hour LC50 : 80.6 %

95% fid. limits : 65.0 - 100.0 %

Comments : 100% MORTALITY IN FULL STRENGTH EFFLUENT

SLOPE of Mortality Curve :
LC50 Calculated By : BINOMIAL

TOXICITY TEST PARAMETERS

Sample Number: 06900116

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
Control	pH	8.0		8.3
	O2 ppm	8.5		7.6
	Cond.	395		376
	Temp(C)	20.0	20.0	20.0
10	pH	8.4		8.3
	O2 ppm	8.3		8.3
	Cond.	528		521
	Temp(C)	20.0	20.0	20.0
20	pH	8.6		8.3
	O2 ppm	8.0		8.4
	Cond.	654		647
	Temp(C)	20.0	20.0	20.0
30	pH	8.8		8.3
	O2 ppm	8.3		8.1
	Cond.	810		793
	Temp(C)	20.0	20.0	20.0
50	pH	9.1		8.4
	O2 ppm	8.5		7.9
	Cond.	1049		1029
	Temp(C)	20.0	20.0	20.0
65	pH	9.2		8.5
	O2 ppm	8.9		7.8
	Cond.	1245		1238
	Temp(C)	20.0	20.0	20.0
100	pH	9.5		8.7
	O2 ppm	9.2		7.7
	Cond.	1703		1711
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 11900006

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge CW, (200)

Laboratory : Paracel lb
Sampling Method : grab
Sampled By : B. Bradley
Date Collected : 04/09/90
Received : 04/09/90
Tested : 04/11/90 at: 1430

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME 00:00	48:00	TOTAL MORTALITY
%			%
100	0	0	0
60	0	0	0
30	0	0	0
15	0	0	0
5	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 11900006

TEST CONC.		ELAPSED TIME 00:00	48:00
%			
100	pH	9.8	9.2
	O2 ppm	9.2	6.3
	Cond.	3231	3691
	Temp(C)	20.0	20.0
60	pH	9.5	8.7
	O2 ppm	9.0	6.9
	Cond.	2138	2410
	Temp(C)	20.0	20.0
30	pH	9.2	8.2
	O2 ppm	8.9	6.9
	Cond.	1283	1458
	Temp(C)	20.0	20.0
15	pH	8.9	8.0
	O2 ppm	8.8	6.9
	Cond.	833	967
	Temp(C)	20.0	20.0
5	pH	8.5	7.9
	O2 ppm	8.8	6.7
	Cond.	546	663
	Temp(C)	20.0	20.0
Control	pH	8.1	7.8
	O2 ppm	8.7	6.7
	Cond.	405	535
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900102

TEST CONDITIONS

Company	: Ivaco Rolling Mills L'Original, ONT (19720408)
Region	: Southeast
Industry	: Iron and Steel
Control point	: East Discharge CW, (200)
Laboratory	: MOE
Sampling Method	: Grab
Sampled By	: P. Taylor
Date Collected	: 06/04/90
Received	: 06/06/90
Tested	: 06/06/90 at: 1300
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	%
100	0	0	0	0	0	1	8
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Many Floaters; Very High Cond.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900102

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	9.3	8.8
	O2 ppm	8.2	8.2
	Cond.	3200	3160
	Temp(C)	20.0	20.0
60	pH	9.0	8.6
	O2 ppm	8.6	8.4
	Cond.	1980	1980
	Temp(C)	20.0	20.0
30	pH	8.7	8.3
	O2 ppm	8.7	8.6
	Cond.	1150	1150
	Temp(C)	20.0	20.0
15	pH	8.4	8.0
	O2 ppm	8.8	8.7
	Cond.	705	715
	Temp(C)	20.0	20.0
5	pH	8.0	7.8
	O2 ppm	8.8	8.6
	Cond.	460	455
	Temp(C)	20.0	20.0
Control	pH	7.7	7.7
	O2 ppm	8.8	8.6
	Cond.	280	280
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 11900035

TEST CONDITIONS

Company : Ivaco Rolling Mills
L'Original, ONT
(19720408)
Region : Southeast
Industry : Iron and Steel

Control point : East Discharge CW, (200)

Laboratory : Paracel Lb
Sampling Method : single grab
Sampled By : B. Bradley
Date Collected : 07/10/90
Received : 07/10/90
Tested : 07/11/90 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
60	0	0	0
30	0	0	0
15	0	0	0
5	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 11900035

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	9.5	8.3
	O2 ppm	8.5	6.5
	Cond.	764	781
	Temp(C)	20.0	20.0
60	pH	9.2	7.9
	O2 ppm	8.7	6.2
	Cond.	596	624
	Temp(C)	20.0	20.0
30	pH	8.9	7.7
	O2 ppm	8.8	5.8
	Cond.	472	508
	Temp(C)	20.0	20.0
15	pH	8.5	7.7
	O2 ppm	9.0	5.8
	Cond.	405	441
	Temp(C)	20.0	20.0
5	pH	8.2	7.6
	O2 ppm	9.2	5.4
	Cond.	361	415
	Temp(C)	20.0	20.0
Control	pH	8.0	7.7
	O2 ppm	9.3	5.9
	Cond.	329	384
	Temp(C)	20.0	20.0

COMPANY: Lasco, Whitby
(26890301)
SECTOR: Iron and Steel
REGION: Central

SUMMARY
The data for twelve acute lethality trout bioassays conducted on samples of final effluent collected between November 1989 and October 1990 were submitted by LASCO. All twelve samples have not been included in the database after an inspection of their contract laboratory revealed the tests were not conducted according to Ministry protocol. Two Ministry audit samples, collected in March and August, were determined to have been nonlethal to test fish.

South Pond

01900036 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

01900164 sampled: 08/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

Storm Water

Waste Disposal Site

Rain Gauge

Intake Water

MISA Trout

TOXICITY TEST REPORT Sample: 01900036

TEST CONDITIONS

Company : Lasco
Whitby, ONT
(26890301)
Region : Central
Industry : Iron and Steel

Control point : South Pond, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : J. Delaney
Date Collected : 03/12/90
Received : 03/13/90
Tested : 03/16/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME									TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	24:00	51:30	71:30	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900036

TEST CONC. %			ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	24:00	51:30	71:30	96:0
100	pH	8.3					8.3	7.8	7.8	7.8	7.
	O2 ppm	9.3					9.3	10.3	10.5	10.2	10.
	Cond.	360					300	365	365	370	37
	Temp(C)	15.0					15.0	15.0	15.0	15.0	15.
65	pH						8.2	7.8	7.7	7.7	7.
	O2 ppm						8.7	10.2	10.4	9.9	9.
	Cond.						335	340	335	340	34
	Temp(C)						15.0	15.0	15.0	15.0	15.
40	pH						8.0	7.8	7.8	7.8	7.
	O2 ppm						9.5	10.4	10.6	10.3	10.
	Cond.						310	315	310	310	31
	Temp(C)						15.0	15.0	15.0	15.0	15.
30	pH						7.9	7.8	7.8	7.8	7.
	O2 ppm						9.3	10.4	10.4	10.2	10.
	Cond.						305	310	305	305	31
	Temp(C)						15.0	15.0	15.0	15.0	15.
20	pH						7.8	7.8	7.8	7.8	7.
	O2 ppm						9.6	10.4	10.4	10.2	10.
	Cond.						295	300	295	295	29
	Temp(C)						15.0	15.0	15.0	15.0	15.
10	pH						7.8	7.8	7.8	7.7	7.
	O2 ppm						9.6	10.4	10.6	10.3	10.
	Cond.						290	290	285	280	29
	Temp(C)						15.0	15.0	15.0	15.0	15.
Control	pH						7.7	7.8	7.8	7.8	7.
	O2 ppm						9.6	10.2	10.3	10.1	10.
	Cond.						265	260	255	275	28
	Temp(C)						15.0	15.0	15.0	15.0	15.

MISA Trout

TOXICITY TEST REPORT Sample: 01900164

TEST CONDITIONS

Company : Lasco
Whitby, ONT
(26890301)
Region : Central
Industry : Iron and Steel

Control point : South Pond, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : C. Rosebush
Date Collected : 08/01/90
Received : 08/01/90
Tested : 08/02/90 at: 1300

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	24:00	47:00	71:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900164

TEST CONC. %		ELAPSED TIME 00:00	01:00	24:00	47:00	71:00	96:00
100	pH	7.6	7.8	7.7	7.7	7.8	7.7
	O2 ppm	6.5	8.6	9.0	9.1	8.9	8.9
	Cond.	315	335	325	325	340	335
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH		7.8	7.7	7.7	7.7	7.7
	O2 ppm		9.0	9.2	9.3	9.2	9.1
	Cond.		310	310	305	320	315
	Temp(C)		15.0	15.0	15.0	15.0	15.0
40	pH		7.8	7.7	7.8	7.8	7.8
	O2 ppm		9.2	9.2	9.4	9.3	9.2
	Cond.		295	295	295	305	305
	Temp(C)		15.0	15.0	15.0	15.0	15.0
30	pH		7.8	7.8	7.8	7.9	7.8
	O2 ppm		9.2	9.3	9.4	9.3	9.1
	Cond.		290	285	285	295	295
	Temp(C)		15.0	15.0	15.0	15.0	15.0
20	pH		7.7	7.7	7.8	7.8	7.6
	O2 ppm		9.2	9.1	9.3	9.3	8.9
	Cond.		280	280	280	290	295
	Temp(C)		15.0	15.0	15.0	15.0	15.0
10	pH		7.7	7.7	7.8	7.8	7.6
	O2 ppm		9.2	8.8	9.0	9.1	9.0
	Cond.		275	280	215	280	285
	Temp(C)		15.0	15.0	15.0	15.0	15.0
Control	pH		7.6	7.3	7.3	7.7	7.7
	O2 ppm		9.0	7.5	7.8	9.0	9.0
	Cond.		265	265	265	270	270
	Temp(C)		15.0	15.0	15.0	15.0	15.0

COMPANY: Lasco, Whitby
(26890301)
SECTOR: Iron and Steel
REGION: Central

SUMMARY
Results for twelve Daphnia magna acute lethality toxicity tests conducted on samples of final effluent collected between November 1989 and October 1990 were submitted by LASCO of Whitby. All 12 samples results were reject after an April 1991 laboratory inspection revealed that the contract lab conducting these tests was not following Ministry protocols. One Ministry audit sample collected in March had a 48 h LC50 > 100 % and one audit conducted in August was not acutely lethal to Daphnia.

South Pond

02900036 sampled: 03/12/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

02900164 sampled: 08/01/90 LC50: 0.0 - 0.0 %
95% fid. limits: 0.0 - 0.0 %
comments: INVALID > 10% Control Mortality

Storm Water

Waste Disposal Site

Rain Gauge

Intake Water

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900036

TEST CONDITIONS

Company : Lasco
Whitby, ONT
(26890301)
Region : Central
Industry : Iron and Steel

Control point : South Pond, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : J. Dezaney
Date Collected : 03/12/90
Received : 03/13/90
Tested : 03/14/90 at: 1347

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	2	16
60	0	0	0	1	8
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900036

TEST CONC.		ELAPSED TIME			
%		00:00	01:00	24:00	48:00
100	pH	8.6			7.9
	O2 ppm	6.7			7.6
	Cond.	426			431
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.4			7.9
	O2 ppm	8.3			7.7
	Cond.	376			381
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.2			7.9
	O2 ppm	8.7			8.0
	Cond.	340			344
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			7.9
	O2 ppm	8.9			8.2
	Cond.	320			324
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.7			7.8
	O2 ppm	8.9			8.1
	Cond.	311			312
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.5			7.6
	O2 ppm	9.1			8.2
	Cond.	303			303
	Temp(C)	20.0	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900164

TEST CONDITIONS

Company : Lasco
Whitby, ONT
(26890301)
Region : Central
Industry : Iron and Steel

Control point : South Pond, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : C. Nosebrush
Date Collected : 08/01/90
Received : 08/01/90
Tested : 08/02/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	1	8
60	0	0	0	0	0	1	8
30	0	0	0	0	0	1	8
15	0	0	0	0	0	1	8
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	3	25

48 Hour LC50 : 0.0 - 0.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : INVALID > 10% Control Mortality

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900164

TEST CONC.		ELAPSED TIME	
%		00:00 01:00 02:00 04:00 24:00 48:00	
100	pH	7.8	7.7
	O2 ppm	7.2	8.6
	Cond.	205	345
	Temp(C)	20.0	20.0
60	pH	7.9	7.8
	O2 ppm	8.1	8.7
	Cond.	230	330
	Temp(C)	20.0	20.0
30	pH	7.9	7.7
	O2 ppm	8.4	8.9
	Cond.	240	315
	Temp(C)	20.0	20.0
15	pH	7.8	7.7
	O2 ppm	8.5	8.9
	Cond.	295	305
	Temp(C)	20.0	20.0
5	pH	7.7	7.7
	O2 ppm	8.5	8.9
	Cond.	295	300
	Temp(C)	20.0	20.0
Control	pH	7.8	7.7
	O2 ppm	8.5	9.1
	Cond.	290	285
	Temp(C)	20.0	20.0

COMPANY: Stelco Steel Hilton Works, Hamilton (950006)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY
The data for 76 acute lethality trout bioassays conducted on effluent samples collected between November 1989 to February 1991 were submitted by Stelco Steel Hilton Works. The company was not in operation during August and September, therefore no data have been submitted for these months. All six samples of West Side Open Cut effluent were determined to have been not acutely lethal to test fish. All six samples, as also with the Ministry audit sample, of Northwest Outfall effluent were determined nonlethal. Nine of ten samples of North Outfall were determined nonlethal, while the remaining sample produced a 96 h LC50 > 100 %. All four samples of East Side Filter were determined nonlethal to fish. Three of ten samples collected from the #1 60 " Sewer were determined to have been acutely lethal to test fish. Samples collected in December 1989, February 1990, and March 1990, produced 96 h LC50s of 80.6 %, 54.4 %, and 75.0 % respectively. An audit sample collected from this site was determined to have been nonlethal. Eight of nine samples collected from the # 2 Rod Mill were determined to have been nonlethal, while the sample collected in November had a 96 h LC50 > 100 %. An audit sample collected in March was nonlethal. Five of six samples collected from the 20 inch Mill were determined nonlethal while the sample collected in April 1990 had a 96 h LC50 > 100 %. All three samples of # 2 60 " Sewer effluent, as also with the Ministry audit sample, were determined to have been nonlethal. A single Intake water sample was tested and determined nonlethal to test fish. All eleven samples of East Side Filter Stage 1 effluent, as also with the Ministry audit sample, were determined to have been not acutely lethal to trout. Six of seven samples collected from East Side Filter Stage 2 effluent were determined nonlethal, while the April 1990 sample produced a 96 h LC50 > 100 %. The Ministry audit, sampled during March 1990, was determined nonlethal to test fish.

West Side Open Cut

03900031 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900057 sampled: 03/28/90 LC50: 0.0 - 0.0 %
95% fid. limits: 0.0 - 0.0 %
comments: INVALID - 20% Control Mort. MISA Audit

03900262 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

03900350 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900439 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900591 sampled: 07/11/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test;20% mort @ 100%conc

03900680 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

Northwest Outfall

03900032 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900056 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900263 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non lethal

03900367 sampled: 05/08/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900440 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900556 sampled: 07/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration Test; 5% mort @ 100%conc

03900681 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

North Outfall

03890263 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890320 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900033 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900088 sampled: 02/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900175 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

01900058 sampled: 03/28/90 LC50: 0.0 - 0.0 %
95% fid. limits: 0.0 - 0.0 %
comments: INVALID-30% Control Mort. MISA Audit

03900264 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non lethal

03900348 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900441 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single conc. test; non lethal

03900552 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

03900682 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

East Side Filter

03890319 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900028 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900086 sampled: 02/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900085 sampled: 02/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

#1 60 inch Sewer

03890268 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890318 sampled: 12/05/89 LC50: 80.6 %
95% fid. limits: 65.0 - 100.0 %
comments:

03900067 sampled: 01/24/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900091 sampled: 02/06/90 LC50: 54.4 %
95% fid. limits: 42.4 - 69.6 % slope: 4.6
comments:

03900176 sampled: 03/06/90 LC50: 75.0 %
95% fid. limits: 61.4 - 91.4 % slope: 8.1
comments: Lethal

03900050 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900268 sampled: 04/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900344 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900442 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900551 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900683 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

#2 Rod Mill

03890266 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890321 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900030 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900089 sampled: 02/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900179 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single test concentration; Non lethal

01900055 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900269 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non lethal

03900343 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900443 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900550 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

20 inch Mill

03890267 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890322 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900029 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900090 sampled: 02/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900180 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single test concentration; Non lethal

03900270 sampled: 04/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; 5% mort. @ 100%

#2 60 inch Sewer

01900049 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900267 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

03900557 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900684 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

East Side Filter OW

Rain Gauge

Intake Water

03900189 sampled: 03/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

East Side Filter Stage 1

03890264 sampled: 11/14/89 non-lethal
95% fid limits: 0.0 - 0.0 %
comments: Non lethal

03890323 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Nonlethal

03900027 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Nonlethal

03900177 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single test concentration; Non lethal

01900053 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900265 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non lethal

03900345 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900444 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900554 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

03900685 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

East Side Filter Stage 2

03890265 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900178 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single test concentration; Non lethal

01900052 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900266 sampled: 04/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; 10% mort. @ 100%

03900346 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900445 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration test; Non lethal

03900555 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration Test; Non lethal

03900686 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

MISA Trout

TOXICITY TEST REPORT Sample: 03900031

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900031

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.6				8.1
	O2 ppm	9.9				9.0
	Cond.	755				770
	Temp(C)	15.0	15.0	14.0	14.0	14.5
65	pH	8.3				8.3
	O2 ppm	9.6				9.2
	Cond.	685				693
	Temp(C)	15.0	15.0	14.0	14.0	14.5
40	pH	8.1				8.3
	O2 ppm	9.3				9.1
	Cond.	633				639
	Temp(C)	15.0	15.0	14.0	14.0	14.5
20	pH	8.0				8.4
	O2 ppm	9.3				9.3
	Cond.	590				591
	Temp(C)	15.0	15.0	14.0	14.0	14.5
10	pH	8.0				8.3
	O2 ppm	9.2				8.9
	Cond.	572				576
	Temp(C)	15.0	15.0	14.0	14.0	14.5
5	pH	7.9				8.4
	O2 ppm	9.0				9.1
	Cond.	560				569
	Temp(C)	15.0	15.0	14.0	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	8.9				9.3
	Cond.	552				558
	Temp(C)	15.0	15.0	14.0	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900057

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 04/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	25:00	46:00	71:00	96:00	%
100	0	0	0	0	10	10	10	100
65	0	0	0	1	2	6	6	60
40	0	0	0	0	3	4	4	40
30	0	0	0	0	0	1	1	10
20	0	0	0	0	1	2	3	30
10	0	0	0	0	1	1	1	10
Control	0	0	0	0	0	2	2	20

96 Hour LC50 : 0.0 - 0.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : INVALID - 20% Control Mort. MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900057

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	25:00	46:00	71:00	96:00
100	pH	8.5	8.2	8.1	8.1	8.1	8.0	
	O2 ppm	10.1	10.3	9.8	10.0	10.0	10.0	
	Cond.	670	660	670	660	670	615	
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	
65	pH		8.0	8.1	8.0	8.1	8.0	
	O2 ppm		10.1	9.8	9.9	10.0	10.1	
	Cond.		530	530	510	530	435	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
40	pH		7.9	8.1	8.0	8.1	8.0	
	O2 ppm		10.2	9.8	10.0	10.0	10.1	
	Cond.		435	435	435	435	410	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
30	pH		7.9	8.0	8.0	8.1	8.0	
	O2 ppm		10.3	9.8	10.0	10.0	9.9	
	Cond.		395	390	385	390	505	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
20	pH		7.8	7.9	7.8	7.9	7.8	
	O2 ppm		10.2	9.7	9.8	9.8	9.8	
	Cond.		345	345	345	350	345	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
10	pH		7.8	7.9	7.9	7.9	7.8	
	O2 ppm		10.1	9.7	9.9	9.9	9.9	
	Cond.		270	315	310	315	305	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	
Control	pH		7.6	7.9	7.9	8.0	7.7	
	O2 ppm		10.3	9.8	9.8	10.0	9.8	
	Cond.		270	265	270	265	255	
	Temp(C)		15.0	15.0	15.0	15.0	15.0	

MISA Trout

TOXICITY TEST REPORT Sample: 03900262

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1425

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish., OME., 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900262

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.6				7.9
	O2 ppm	9.6				8.9
	Cond.	953				957
	Temp(C)	15.0	14.5	15.0	14.5	14.0
65	pH	8.3				8.2
	O2 ppm	9.4				9.4
	Cond.	808				807
	Temp(C)	15.0	14.5	15.0	14.5	14.0
40	pH	8.1				8.1
	O2 ppm	9.3				8.5
	Cond.	704				709
	Temp(C)	15.0	14.5	15.0	14.5	14.0
20	pH	7.9				8.4
	O2 ppm	9.4				9.5
	Cond.	621				619
	Temp(C)	15.0	14.5	15.0	14.5	14.0
10	pH	7.9				8.3
	O2 ppm	9.1				9.2
	Cond.	568				578
	Temp(C)	15.0	14.5	15.0	14.5	14.0
5	pH	7.9				8.5
	O2 ppm	8.9				9.7
	Cond.	556				545
	Temp(C)	15.0	14.5	15.0	14.5	14.0
Control	pH	7.9				8.2
	O2 ppm	8.9				8.4
	Cond.	538				539
	Temp(C)	15.0	14.5	15.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900350

TEST CONDITIONS

Company : Stelco Steel Milton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1355

Type of Biossay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish., OME., 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. Limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900350

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.2
	O2 ppm	9.8				9.8
	Cond.	831				836
	Temp(C)	15.5	15.0	15.0	14.5	14.5
65	pH	8.2				8.2
	O2 ppm	9.9				9.7
	Cond.	728				731
	Temp(C)	15.5	15.0	15.0	14.5	14.5
40	pH	8.1				8.5
	O2 ppm	9.9				9.7
	Cond.	654				657
	Temp(C)	15.5	15.0	15.0	14.5	14.5
20	pH	8.0				8.5
	O2 ppm	9.9				9.7
	Cond.	603				605
	Temp(C)	15.5	15.0	15.0	14.5	14.5
10	pH	8.0				8.5
	O2 ppm	9.8				9.9
	Cond.	574				567
	Temp(C)	15.5	15.0	15.0	14.5	14.5
5	pH	8.0				8.5
	O2 ppm	9.9				9.9
	Cond.	562				560
	Temp(C)	15.5	15.0	15.0	14.5	14.5
Control	pH	8.0				8.4
	O2 ppm	9.2				9.6
	Cond.	548				503
	Temp(C)	15.8	15.0	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Samples: 03900439

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(9500006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1205

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. Limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900439

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.1				8.7
	Cond.	787				777
	Temp(C)	15.0	15.5	15.5	16.0	16.0
65	pH	8.0				8.0
	O2 ppm	9.0				8.1
	Cond.	702				693
	Temp(C)	15.0	15.5	15.5	16.0	16.0
40	pH	8.0				7.9
	O2 ppm	8.8				7.4
	Cond.	640				632
	Temp(C)	15.0	15.5	15.5	16.0	16.0
20	pH	7.9				8.3
	O2 ppm	8.8				8.6
	Cond.	592				583
	Temp(C)	15.0	15.5	15.5	16.0	16.0
10	pH	7.9				8.0
	O2 ppm	8.8				7.3
	Cond.	569				563
	Temp(C)	15.0	15.5	15.5	16.0	16.0
5	pH	7.8				8.3
	O2 ppm	8.4				8.2
	Cond.	557				548
	Temp(C)	15.0	15.5	15.5	16.0	16.0
Control	pH	7.8				8.2
	O2 ppm	8.5				8.0
	Cond.	542				535
	Temp(C)	15.0	15.5	15.5	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900591

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/11/90
Received : 07/12/90
Tested : 07/12/90 at: 1320

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	1	1	2	2	20
100	0	1	1	2	2	20
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test;20% mort @ 100%conc

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900591

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	9.2				8.9
	Cond.	708				725
	Temp(C)	15.5	15.0	15.5	15.0	15.5
100	pH	8.1				8.1
	O2 ppm	9.2				8.8
	Cond.	708				716
	Temp(C)	15.5	15.0	15.5	15.0	15.5
Control	pH	7.9				8.2
	O2 ppm	8.7				8.5
	Cond.	539				549
	Temp(C)	15.5	15.0	15.5	15.0	15.5
Control	pH	7.9				8.3
	O2 ppm	8.7				8.8
	Cond.	539				558
	Temp(C)	15.5	15.0	15.5	15.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900680

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900680

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.4				8.1
	O2 ppm	8.9				9.3
	Cond.	1092				1111
	Temp(C)	16.0	15.5	16.0	16.0	15.5
100	pH	8.4				8.1
	O2 ppm	8.9				9.4
	Cond.	1092				1111
	Temp(C)	16.0	15.5	16.0	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.3				9.1
	Cond.	529				539
	Temp(C)	16.0	15.5	16.0	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.3				9.2
	Cond.	529				535
	Temp(C)	16.0	15.5	16.0	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900032

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900032

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	9.9				9.1
	Cond.	810				630
	Temp(C)	15.0	15.0	14.0	14.0	14.5
65	pH	8.0				8.3
	O2 ppm	9.6				8.9
	Cond.	584				603
	Temp(C)	15.0	15.0	14.0	14.0	14.5
40	pH	8.0				8.3
	O2 ppm	9.5				8.9
	Cond.	569				585
	Temp(C)	15.0	15.0	14.0	14.0	14.5
20	pH	8.0				8.1
	O2 ppm	9.3				8.3
	Cond.	556				573
	Temp(C)	15.0	15.0	14.0	14.0	14.5
10	pH	7.9				8.3
	O2 ppm	9.3				8.6
	Cond.	554				560
	Temp(C)	15.0	15.0	14.0	14.0	14.5
5	pH	7.9				8.4
	O2 ppm	9.3				8.6
	Cond.	552				555
	Temp(C)	15.0	15.0	14.0	14.0	14.5
Control	pH	7.9				8.4
	O2 ppm	9.3				8.8
	Cond.	550				553
	Temp(C)	15.0	15.0	14.0	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900056

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 04/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME									TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	23:30	45:30	70:30	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900056

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	23:30	45:30	70:30	96:0
100	pH	8.2		7.9		7.9	7.9	7.9	7.9	8.
	O2 ppm	10.6		10.1		9.7	9.9	10.0	10.0	10.
	Cond.	500		540		540	525	540	540	52
	Temp(C)	15.0		15.0		15.0	15.0	15.0	15.0	15.
65	pH			7.9		8.0	7.9	8.0	8.0	8.
	O2 ppm			10.3		9.7	10.0	10.0	10.0	10.
	Cond.			445		445	445	450	445	42
	Temp(C)			15.0		15.0	15.0	15.0	15.0	15.
40	pH			7.8		7.8	7.8	7.8	7.8	7.
	O2 ppm			10.1		9.7	9.9	9.9	10.0	10.
	Cond.			380		380	370	380	380	36
	Temp(C)			15.0		15.0	15.0	15.0	15.0	15.
30	pH			7.9		7.9	7.9	7.9	7.9	7.
	O2 ppm			10.3		9.8	10.1	10.0	10.0	10.
	Cond.			350		350	345	380	350	34
	Temp(C)			15.0		15.0	15.0	15.0	15.0	15.
20	pH			8.0		7.9	7.9	8.0	7.9	7.
	O2 ppm			10.2		9.8	10.0	10.0	10.0	10.
	Cond.			320		320	315	320	320	31
	Temp(C)			15.0		15.0	15.0	15.0	15.0	15.
10	pH			8.0		7.9	7.8	7.9	7.9	7.
	O2 ppm			10.1		9.8	9.9	10.0	10.0	10.
	Cond.			280		305	285	300	290	29
	Temp(C)			15.0		15.0	15.0	15.0	15.0	15.
Control	pH			7.7		7.9	7.8	7.9	7.9	7.
	O2 ppm			10.3		9.8	9.9	10.0	10.0	10.
	Cond.			275		270	270	275	260	26
	Temp(C)			15.0		15.0	15.0	15.0	15.0	15.

MISA Trout

TOXICITY TEST REPORT Sample: 03900263

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1120

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900263

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.5				8.1
	O2 ppm	9.7				9.6
	Cond.	741				752
	Temp(C)	15.0	14.5	14.0	14.5	14.0
100	pH	8.5				8.1
	O2 ppm	9.7				9.8
	Cond.	741				753
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.3
	O2 ppm	9.1				9.4
	Cond.	527				523
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.7
	Cond.	527				529
	Temp(C)	15.0	14.5	14.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900367

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Piedl
Date Collected : 05/08/90
Received : 05/08/90
Tested : 05/09/90 at: 1250

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900367

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.2
	O2 ppm	9.6				9.4
	Cond.	776				763
	Temp(C)	15.0	16.0	15.0	14.0	14.0
65	pH	8.0				8.4
	O2 ppm	9.4				9.5
	Cond.	694				686
	Temp(C)	15.0	16.0	15.0	14.0	14.0
40	pH	7.9				8.5
	O2 ppm	9.0				9.5
	Cond.	636				623
	Temp(C)	15.0	16.0	15.0	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	8.9				9.1
	Cond.	593				582
	Temp(C)	15.0	16.0	15.0	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	9.0				9.1
	Cond.	569				559
	Temp(C)	15.0	16.0	15.0	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	9.0				9.6
	Cond.	559				547
	Temp(C)	15.0	16.0	15.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.8				9.6
	Cond.	548				526
	Temp(C)	15.0	16.0	15.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900440

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: Northwest Outfall, (200)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 06/05/90
Received	: 06/05/90
Tested	: 06/06/90 at: 1325
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900440

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	9.1				8.6
	Cond.	734				725
	Temp(C)	15.0	15.5	15.0	16.0	15.5
65	pH	8.0				8.1
	O2 ppm	9.0				8.5
	Cond.	670				658
	Temp(C)	15.0	15.5	15.0	16.0	15.5
40	pH	7.9				8.1
	O2 ppm	8.8				8.4
	Cond.	620				613
	Temp(C)	15.0	15.5	15.0	16.0	15.5
20	pH	7.9				8.3
	O2 ppm	8.8				8.2
	Cond.	584				577
	Temp(C)	15.0	15.5	15.0	16.0	15.5
10	pH	7.9				8.3
	O2 ppm	8.4				8.1
	Cond.	563				557
	Temp(C)	15.0	15.5	15.0	16.0	15.5
5	pH	7.8				8.1
	O2 ppm	8.4				7.4
	Cond.	555				551
	Temp(C)	15.0	15.5	15.0	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.3				8.5
	Cond.	546				540
	Temp(C)	15.0	15.5	15.0	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900556

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : [redacted]
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1555

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	1	1	1	10
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration Test; 5% mort @ 100%conc

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900556

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.8
	O2 ppm	9.4				8.8
	Cond.	682				660
	Temp(C)	15.5	15.0	15.5	16.0	15.5
100	pH	8.0				7.6
	O2 ppm	9.4				8.1
	Cond.	682				663
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.9				8.2
	O2 ppm	9.7				8.9
	Cond.	536				527
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.9				8.2
	O2 ppm	9.7				8.9
	Cond.	536				531
	Temp(C)	15.5	15.0	15.5	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900681

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : RAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1205

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900681

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.0
	O2 ppm	8.9				9.2
	Cond.	593				609
	Temp(C)	16.0	15.5	16.0	16.0	15.5
100	pH	8.3				7.9
	O2 ppm	8.9				8.9
	Cond.	593				608
	Temp(C)	16.0	15.5	16.0	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.0				9.0
	Cond.	533				540
	Temp(C)	16.0	15.5	16.0	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.0				9.0
	Cond.	533				540
	Temp(C)	16.0	15.5	16.0	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890263

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/16/89 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890263

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.4
	O2 ppm	8.9					9.2
	Cond.	563					563
	Temp(C)	15.5	14.5	14.0	14.0	14.0	15.0
10	pH	7.9					8.4
	O2 ppm	9.0					9.1
	Cond.	562					563
	Temp(C)	15.5	14.5	14.0	14.0	14.0	15.0
20	pH	7.8					8.4
	O2 ppm	9.0					9.2
	Cond.	559					569
	Temp(C)	15.5	14.5	14.0	14.0	14.0	15.0
40	pH	7.9					8.4
	O2 ppm	9.1					9.3
	Cond.	557					572
	Temp(C)	15.5	14.5	14.0	14.0	14.0	15.0
65	pH	7.9					8.1
	O2 ppm	9.3					9.0
	Cond.	554					572
	Temp(C)	15.5	14.5	14.0	14.0	14.0	15.0
100	pH	8.0					7.8
	O2 ppm	9.6					8.6
	Cond.	553					574
	Temp(C)	15.5	14.5	14.0	14.0	14.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890320

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890320

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	9.9				9.3
	Cond.	582				600
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.8				8.2
	O2 ppm	9.4				9.5
	Cond.	576				587
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.7				8.3
	O2 ppm	9.2				9.4
	Cond.	573				574
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.7				8.2
	O2 ppm	9.3				9.4
	Cond.	571				580
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.7				8.4
	O2 ppm	9.2				9.4
	Cond.	570				563
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.7				8.3
	O2 ppm	8.8				9.1
	Cond.	566				569
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900033

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	1	1	10
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	1	10

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900033

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.7				7.9
	O2 ppm	9.2				8.8
	Cond.	602				610
	Temp(C)	15.0	15.0	15.0	14.0	14.5
65	pH	8.4				8.1
	O2 ppm	9.1				8.9
	Cond.	584				590
	Temp(C)	15.0	15.0	15.0	14.0	14.5
40	pH	8.2				8.1
	O2 ppm	8.9				8.7
	Cond.	572				578
	Temp(C)	15.0	15.0	15.0	14.0	14.5
20	pH	8.1				8.2
	O2 ppm	8.8				8.8
	Cond.	562				565
	Temp(C)	15.0	15.0	15.0	14.0	14.5
10	pH	8.0				8.4
	O2 ppm	8.7				9.4
	Cond.	558				555
	Temp(C)	15.0	15.0	15.0	14.0	14.5
5	pH	7.9				8.4
	O2 ppm	8.6				9.2
	Cond.	556				554
	Temp(C)	15.0	15.0	15.0	14.0	14.5
Control	pH	7.9				8.4
	O2 ppm	8.4				9.2
	Cond.	554				554
	Temp(C)	15.0	15.0	15.0	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900088

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	1	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900088

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.7				8.0
	O2 ppm	9.9				8.9
	Cond.	693				698
	Temp(C)	15.0	15.0	15.0	15.0	14.0
100	pH	8.7				8.0
	O2 ppm	9.9				8.9
	Cond.	693				698
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.6
	O2 ppm	8.3				9.5
	Cond.	539				532
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.3				9.5
	Cond.	539				535
	Temp(C)	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900175

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1345

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900175

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.1
	O2 ppm	11.2				9.3
	Cond.	731				743
	Temp(C)	14.0	14.0	14.0	14.5	14.5
100	pH	8.2				8.1
	O2 ppm	11.2				9.1
	Cond.	731				738
	Temp(C)	14.0	14.0	14.0	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.2				9.1
	Cond.	538				536
	Temp(C)	14.0	14.0	14.0	14.5	14.5
Control	pH	7.9				8.3
	O2 ppm	9.2				8.5
	Cond.	538				538
	Temp(C)	14.0	14.0	14.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900058

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 04/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	02:00	25:00	46:00	71:00	96:00	%
100	0	0	3	10	10	10	10	100
65	0	0	0	10	10	10	10	100
40	0	0	0	0	5	8	8	80
30	0	0	0	0	0	0	0	0
20	0	0	0	0	3	4	4	40
10	0	0	0	0	0	2	2	20
Control	0	0	0	0	0	3	3	30

96 Hour LC50 : 0.0 - 0.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : INVALID-30% Control Mort. MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900058

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	25:00	46:00	71:00	96:00
100	pH	8.1		8.1	8.1	8.1	7.9	7.6
	O2 ppm	10.6		10.3	10.1	10.0	9.2	7.0
	Cond.	530		530	540	520	540	530
	Temp(C)	15.0		15.0	15.0	15.0	15.0	15.0
65	pH			8.0	8.1	8.0	7.8	7.6
	O2 ppm			10.4	9.9	9.9	8.8	7.7
	Cond.			445	445	435	445	440
	Temp(C)			15.0	15.0	15.0	15.0	15.0
40	pH			8.8	8.1	8.1	8.8	8.0
	O2 ppm			10.4	9.8	10.0	9.9	9.9
	Cond.			380	375	375	375	375
	Temp(C)			15.0	15.0	15.0	15.0	15.0
30	pH			7.9	8.0	7.9	8.0	7.9
	O2 ppm			10.3	9.9	9.9	10.0	10.0
	Cond.			350	350	345	345	345
	Temp(C)			15.0	15.0	15.0	15.0	15.0
20	pH			7.8	7.9	7.9	7.9	8.0
	O2 ppm			10.3	9.8	9.7	10.0	9.8
	Cond.			320	320	315	320	315
	Temp(C)			15.0	15.0	15.0	15.0	15.0
10	pH			7.9	8.0	7.9	8.0	7.9
	O2 ppm			10.4	9.9	9.9	10.0	9.9
	Cond.			280	300	295	300	295
	Temp(C)			15.0	15.0	15.0	15.0	15.0
Control	pH			7.4	7.9	7.9	8.0	7.7
	O2 ppm			10.4	9.9	9.8	10.0	9.9
	Cond.			270	265	260	265	245
	Temp(C)			15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900264

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1055

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900264

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.5				8.1
	O2 ppm	10.1				9.7
	Cond.	732				727
	Temp(C)	15.0	14.5	14.0	14.5	14.0
100	pH	8.5				8.0
	O2 ppm	10.1				9.5
	Cond.	732				730
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.6
	Cond.	541				539
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.3
	O2 ppm	9.1				9.5
	Cond.	541				531
	Temp(C)	15.0	14.5	14.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900348

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1130

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900348

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.1
	O2 ppm	10.0				9.3
	Cond.	760				767
	Temp(C)	15.5	15.0	15.0	14.5	15.0
100	pH	8.3				8.1
	O2 ppm	10.0				9.2
	Cond.	760				773
	Temp(C)	15.5	15.0	15.0	14.5	15.0
Control	pH	7.9				8.3
	O2 ppm	9.7				9.1
	Cond.	551				560
	Temp(C)	15.5	15.0	15.0	14.5	15.0
Control	pH	7.9				8.3
	O2 ppm	9.7				9.2
	Cond.	551				538
	Temp(C)	15.5	15.0	15.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900441

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/06/90
Tested : 06/06/90 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single conc. test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900441

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				7.9
	O2 ppm	9.3				8.0
	Cond.	733				726
	Temp(C)	15.0	15.5	15.0	16.0	15.5
100	pH	8.0				8.1
	O2 ppm	9.3				8.8
	Cond.	733				729
	Temp(C)	15.0	15.5	15.0	16.0	15.5
Control	pH	7.8				8.2
	O2 ppm	8.3				8.2
	Cond.	545				536
	Temp(C)	15.0	15.5	15.0	16.0	15.5
Control	pH	7.8				8.2
	O2 ppm	8.3				8.4
	Cond.	545				539
	Temp(C)	15.0	15.5	15.0	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900552

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1210

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900552

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.8				8.9
	Cond.	697				681
	Temp(C)	15.5	15.0	15.5	16.0	15.5
100	pH	8.0				7.7
	O2 ppm	9.8				7.9
	Cond.	697				684
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	9.7				9.0
	Cond.	540				528
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.8				8.5
	O2 ppm	9.7				9.1
	Cond.	540				526
	Temp(C)	15.5	15.0	15.5	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900682

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1225

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900682

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.2
	O2 ppm	9.2				9.5
	Cond.	598				608
	Temp(C)	16.0	15.5	16.0	16.0	15.5
100	pH	8.2				8.1
	O2 ppm	9.2				9.4
	Cond.	598				609
	Temp(C)	16.0	15.5	16.0	16.0	15.5
Control	pH	7.8				8.4
	O2 ppm	8.1				9.3
	Cond.	533				535
	Temp(C)	16.0	15.5	16.0	16.0	15.5
Control	pH	7.8				8.4
	O2 ppm	8.1				9.4
	Cond.	533				535
	Temp(C)	16.0	15.5	16.0	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890319

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890319

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.8
	O2 ppm	8.8				8.9
	Cond.	610				618
	Temp(C)	15.5	14.5	14.5	14.5	14.5
65	pH	7.7				8.3
	O2 ppm	8.9				9.7
	Cond.	596				594
	Temp(C)	15.5	14.5	14.5	14.5	14.5
40	pH	7.7				8.3
	O2 ppm	8.9				9.6
	Cond.	582				580
	Temp(C)	15.5	14.5	14.5	14.5	14.5
20	pH	7.7				8.4
	O2 ppm	8.8				9.7
	Cond.	576				565
	Temp(C)	15.5	14.5	14.5	14.5	14.5
10	pH	7.7				8.4
	O2 ppm	8.8				9.6
	Cond.	571				563
	Temp(C)	15.5	14.5	14.5	14.5	14.5
Control	pH	7.6				8.4
	O2 ppm	8.9				9.7
	Cond.	569				560
	Temp(C)	15.5	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900028

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/16/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900028

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.6				8.1
	O2 ppm	9.6				9.4
	Cond.	660				671
	Temp(C)	15.0	15.0	15.0	14.0	14.0
65	pH	7.8				8.2
	O2 ppm	9.5				9.3
	Cond.	620				626
	Temp(C)	15.0	15.0	15.0	14.0	14.0
40	pH	7.9				8.4
	O2 ppm	9.4				9.2
	Cond.	593				608
	Temp(C)	15.5	15.0	15.0	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	9.3				9.3
	Cond.	570				586
	Temp(C)	15.5	15.0	15.0	14.0	14.0
10	pH	7.9				8.5
	O2 ppm	9.3				9.1
	Cond.	563				568
	Temp(C)	16.0	15.0	15.0	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	9.2				9.0
	Cond.	556				559
	Temp(C)	16.0	15.0	15.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	9.2				9.3
	Cond.	551				558
	Temp(C)	16.0	15.0	15.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900086

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900086

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				8.0
	O2 ppm	7.4				8.8
	Cond.	734				736
	Temp(C)	15.0	15.0	15.0	15.0	14.0
100	pH	7.7				7.9
	O2 ppm	7.4				8.4
	Cond.	734				736
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.3				9.3
	Cond.	536				537
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.3				9.2
	Cond.	536				536
	Temp(C)	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900085

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter, (601)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 02/06/90
Received	: 02/06/90
Tested	: 02/07/90 at: 1200
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900085

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.1
	O2 ppm	8.1				9.2
	Cond.	734				738
	Temp(C)	15.0	15.0	15.0	15.0	14.0
100	pH	7.8				8.1
	O2 ppm	8.1				9.1
	Cond.	734				738
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.3				8.9
	Cond.	535				541
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.3
	O2 ppm	8.3				8.9
	Cond.	535				539
	Temp(C)	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890268

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/16/89 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890268

TEST CONC.		ELAPSED TIME					
%		00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.8					8.5
	O2 ppm	8.8					9.3
	Cond.	561					561
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
10	pH	7.8					8.4
	O2 ppm	9.0					9.2
	Cond.	566					565
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
20	pH	7.8					8.4
	O2 ppm	9.0					9.3
	Cond.	574					570
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
40	pH	7.7					8.3
	O2 ppm	9.1					9.2
	Cond.	583					586
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
65	pH	7.5					8.2
	O2 ppm	9.2					9.3
	Cond.	594					597
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
100	pH	6.8					7.4
	O2 ppm	9.3					8.5
	Cond.	611					620
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890318

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1130

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	4	8	9	10	100
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 80.6 %

95% fid. limits : 65.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03890318

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	3.9		4.0		4.0
	O2 ppm	9.7		10.0		9.7
	Cond.	732		731		714
	Temp(C)	15.0	15.0	14.5	14.5	14.5
65	pH	6.8				7.9
	O2 ppm	9.3				9.3
	Cond.	644				645
	Temp(C)	15.0	15.0	14.5	14.5	14.5
40	pH	7.2				8.2
	O2 ppm	9.1				9.4
	Cond.	615				614
	Temp(C)	15.0	15.0	14.5	14.5	14.5
20	pH	7.5				8.2
	O2 ppm	8.7				9.2
	Cond.	594				590
	Temp(C)	15.0	15.0	14.5	14.5	14.5
10	pH	7.6				8.3
	O2 ppm	8.7				9.3
	Cond.	585				576
	Temp(C)	15.0	15.0	14.5	14.5	14.5
Control	pH	7.7				8.2
	O2 ppm	8.8				8.7
	Cond.	568				567
	Temp(C)	15.0	15.0	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900067

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/24/90
Received : 01/24/90
Tested : 01/25/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	1	1	1	10
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900067

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	6.0				7.5
	O2 ppm	9.8				9.9
	Cond.	726				717
	Temp(C)	15.0	14.5	14.5	14.5	15.0
65	pH	7.0				8.0
	O2 ppm	9.3				9.9
	Cond.	654				651
	Temp(C)	15.0	14.5	14.5	14.5	15.0
40	pH	7.4				8.3
	O2 ppm	8.7				10.2
	Cond.	610				604
	Temp(C)	15.0	14.5	14.5	14.5	15.0
20	pH	7.6				8.4
	O2 ppm	8.4				10.2
	Cond.	576				566
	Temp(C)	15.0	14.5	14.5	14.5	15.0
10	pH	7.8				8.5
	O2 ppm	8.2				10.2
	Cond.	556				547
	Temp(C)	15.0	14.5	14.5	14.5	15.0
5	pH	7.8				8.4
	O2 ppm	8.5				10.0
	Cond.	550				541
	Temp(C)	15.0	14.5	14.5	14.5	15.0
Control	pH	7.8				8.5
	O2 ppm	8.5				10.2
	Cond.	543				531
	Temp(C)	15.0	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900091

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	0	10	10	10	10	10	10	100
65	0	0	0	0	2	6	6	6	60
40	0	0	0	0	2	2	2	2	20
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 54.4 %

95% fid. limits : 42.4 - 69.6 %

Comments :

SLOPE of Mortality Curve : 4.6
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900091

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	3.1		3.1					
	O2 ppm	9.7		9.7					
	Cond.	1214		1214					
	Temp(C)	15.0	15.0	15.0					
65	pH	6.4					7.3		
	O2 ppm	9.3					8.4		
	Cond.	732					732		
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0
40	pH	7.0							8.0
	O2 ppm	9.1							9.3
	Cond.	656							648
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0
20	pH	7.3							8.2
	O2 ppm	8.9							9.5
	Cond.	589							590
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0
10	pH	7.6							8.2
	O2 ppm	8.8							9.1
	Cond.	567							566
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0
5	pH	7.7							8.3
	O2 ppm	8.8							8.8
	Cond.	551							550
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0
Control	pH	7.9							8.4
	O2 ppm	8.7							9.1
	Cond.	533							534
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900176

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1240

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	0	0	10	10	10	10	10	100
65	0	0	0	0	1	1	1	1	10
40	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 75.0 %

95% fid. limits : 61.4 - 91.4 %

Comments : Lethal

SLOPE of Mortality Curve : 8.1
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900176

TEST CONC. %		ELAPSED TIME 00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	2.8			2.8				
	O2 ppm	10.2			10.2				
	Cond.	1425			1425				
	Temp(C)	15.0	14.5	14.5	14.5				
65	pH	6.0							7.7
	O2 ppm	10.1							8.8
	Cond.	733							747
	Temp(C)	15.0	14.5	14.5	14.5	14.0	14.0	15.0	15.0
40	pH	6.9							8.1
	O2 ppm	9.9							9.0
	Cond.	661							679
	Temp(C)	15.0	14.5	14.5	14.5	14.0	14.0	15.0	15.0
20	pH	7.2							8.2
	O2 ppm	9.7							9.0
	Cond.	603							613
	Temp(C)	15.0	14.5	14.5	14.5	14.0	14.0	15.0	15.0
10	pH	7.4							8.3
	O2 ppm	9.5							9.1
	Cond.	571							574
	Temp(C)	15.0	14.5	14.5	14.5	14.0	14.0	15.0	15.0
5	pH	7.6							8.3
	O2 ppm	9.4							9.1
	Cond.	558							554
	Temp(C)	15.0	14.5	14.5	14.5	14.0	14.0	15.0	15.0
Control	pH	8.2							8.5
	O2 ppm	9.4							9.3
	Cond.	538							533
	Temp(C)	15.0	14.5	14.5	14.5	14.0	14.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900050

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : MOE
Sampling Method : Grab
Sampled By : B. Trach
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/30/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	29:00	50:00	70:30	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900050

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	29:00	50:00	70:30	96:0
100	pH	7.0		7.5			7.7	7.7	7.7	7.
	O2 ppm	12.4		9.4			10.0	10.5	10.0	10.
	Cond.	490		540			555	550	560	54
	Temp(C)	15.0		15.0			15.0	15.0	15.0	15.
65	pH			7.6			7.7	7.7	7.8	7.
	O2 ppm			10.0			10.0	10.4	10.0	10.
	Cond.			455			460	455	460	44
	Temp(C)			15.0			15.0	15.0	15.0	15.
40	pH			7.6			7.8	7.8	7.9	7.
	O2 ppm			9.9			10.0	10.4	10.0	10.
	Cond.			385			390	380	385	38
	Temp(C)			15.0			15.0	15.0	15.0	15.
30	pH			7.7			7.7	7.7	7.8	7.
	O2 ppm			10.0			9.8	10.3	9.9	10.
	Cond.			355			355	355	355	35
	Temp(C)			15.0			15.0	15.0	15.0	15.
20	pH			7.8			7.8	7.8	7.9	7.
	O2 ppm			10.0			9.8	10.4	9.9	10.
	Cond.			325			325	325	325	32
	Temp(C)			15.0			15.0	15.0	15.0	15.
10	pH			7.7			7.7	7.7	7.8	7.
	O2 ppm			9.8			9.6	10.2	9.8	10.
	Cond.			305			300	300	305	30
	Temp(C)			15.0			15.0	15.0	15.0	15.
Control	pH			7.8			7.8	7.8	7.9	7.
	O2 ppm			9.9			10.0	10.5	10.1	10.
	Cond.			275			265	260	275	26
	Temp(C)			15.0			15.0	15.0	15.0	15.

MISA Trout

TOXICITY TEST REPORT Sample: 03900268

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1440

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	1	3	3	4	40
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	1	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900268

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	6.6				7.7
	O2 ppm	9.9				9.3
	Cond.	820				815
	Temp(C)	15.0	14.5	15.0	14.5	14.0
65	pH	7.1				7.9
	O2 ppm	9.4				8.8
	Cond.	718			14	715
	Temp(C)	15.0	14.5	15.0	5.0	14.0
40	pH	7.3				7.9
	O2 ppm	9.3				8.2
	Cond.	648				652
	Temp(C)	15.0	14.5	15.0	14.5	14.0
20	pH	7.6				8.2
	O2 ppm	9.3				9.4
	Cond.	597				594
	Temp(C)	15.0	14.5	15.0	14.5	14.0
10	pH	7.8				8.4
	O2 ppm	9.3				9.5
	Cond.	569				562
	Temp(C)	15.0	14.5	15.0	14.5	14.0
5	pH	7.8				8.4
	O2 ppm	9.3				9.5
	Cond.	556				547
	Temp(C)	15.0	14.5	15.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.2				9.2
	Cond.	536				536
	Temp(C)	15.0	14.5	15.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900344

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1125

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900344

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	6.5				7.7
	O2 ppm	9.8				9.5
	Cond.	820				822
	Temp(C)	15.5	15.0	15.0	14.5	15.0
65	pH	7.1				8.2
	O2 ppm	9.8				9.5
	Cond.	728				726
	Temp(C)	15.5	15.0	15.0	14.5	15.0
40	pH	7.3				8.3
	O2 ppm	9.8				9.2
	Cond.	658				663
	Temp(C)	15.5	15.0	15.0	14.5	15.0
20	pH	7.7				8.3
	O2 ppm	9.7				9.2
	Cond.	605				606
	Temp(C)	15.5	15.0	15.0	14.5	15.0
10	pH	7.8				8.3
	O2 ppm	9.7				9.4
	Cond.	576				576
	Temp(C)	15.5	15.0	15.0	14.5	15.0
5	pH	7.9				8.4
	O2 ppm	9.7				9.4
	Cond.	563				564
	Temp(C)	15.5	15.0	15.0	14.5	15.0
Control	pH	8.0				8.4
	O2 ppm	9.6				9.5
	Cond.	553				530
	Temp(C)	15.5	15.0	15.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900442

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1210

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900442

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.3				9.0
	Cond.	725				727
	Temp(C)	15.0	15.5	15.5	16.0	16.0
65	pH	7.9				8.2
	O2 ppm	9.1				8.9
	Cond.	665				659
	Temp(C)	15.0	15.5	15.5	16.0	16.0
40	pH	7.9				8.3
	O2 ppm	8.8				9.0
	Cond.	622				608
	Temp(C)	15.0	15.5	15.5	16.0	16.0
20	pH	7.8				8.4
	O2 ppm	8.6				8.9
	Cond.	582				573
	Temp(C)	15.0	15.5	15.5	16.0	16.0
10	pH	7.8				8.3
	O2 ppm	8.6				8.5
	Cond.	560				555
	Temp(C)	15.0	15.5	15.5	16.0	16.0
5	pH	7.8				8.4
	O2 ppm	8.6				8.6
	Cond.	551				542
	Temp(C)	15.0	15.5	15.5	16.0	16.0
Control	pH	7.8				8.3
	O2 ppm	8.6				8.7
	Cond.	545				530
	Temp(C)	15.0	15.5	15.5	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900551

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1400

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900551

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	9.9				9.3
	Cond.	605				680
	Temp(C)	15.5	15.0	14.5	15.0	15.0
65	pH	8.0				8.0
	O2 ppm	9.9				8.7
	Cond.	635				632
	Temp(C)	15.5	15.0	14.5	15.0	15.0
40	pH	7.9				8.1
	O2 ppm	9.9				8.9
	Cond.	598				590
	Temp(C)	15.5	15.0	14.5	15.0	15.0
20	pH	7.9				8.3
	O2 ppm	9.9				9.0
	Cond.	563				560
	Temp(C)	15.5	15.0	14.5	15.0	15.0
10	pH	7.9				8.1
	O2 ppm	9.8				8.3
	Cond.	549				546
	Temp(C)	15.5	15.0	14.5	15.0	15.0
5	pH	7.9				8.2
	O2 ppm	9.8				9.0
	Cond.	545				538
	Temp(C)	15.5	15.0	14.5	15.0	15.0
Control	pH	7.8				8.2
	O2 ppm	9.7				8.5
	Cond.	536				533
	Temp(C)	15.5	15.0	14.5	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900683

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1335

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900683

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	8.4				9.3
	Cond.	614				625
	Temp(C)	16.0	15.5	15.0	15.5	15.5
100	pH	8.1				8.0
	O2 ppm	8.4				9.1
	Cond.	614				623
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.4				9.1
	Cond.	535				537
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.4				9.0
	Cond.	535				540
	Temp(C)	16.0	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890266

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/15/89 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890266

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.6					8.6
	O2 ppm	7.0					9.5
	Cond.	563					555
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
10	pH	7.6					8.4
	O2 ppm	7.1					9.2
	Cond.	544					547
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
20	pH	7.6					8.5
	O2 ppm	7.1					9.2
	Cond.	523					523
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
40	pH	7.7					8.4
	O2 ppm	7.4					9.4
	Cond.	485					486
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
65	pH	7.7					8.2
	O2 ppm	7.9					9.3
	Cond.	434					435
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
100	pH	8.0					8.1
	O2 ppm	9.4					9.3
	Cond.	363					365
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890321

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890321

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.1
	O2 ppm	9.8				9.1
	Cond.	349				355
	Temp(C)	15.0	14.5	14.0	14.5	14.5
65	pH	7.7				8.1
	O2 ppm	9.3				9.2
	Cond.	428				432
	Temp(C)	15.0	14.5	14.0	14.5	14.5
40	pH	7.7				8.2
	O2 ppm	9.1				9.2
	Cond.	482				482
	Temp(C)	15.0	14.5	14.0	14.5	14.5
20	pH	7.7				8.2
	O2 ppm	8.7				8.9
	Cond.	544				521
	Temp(C)	15.0	14.5	14.0	14.5	14.5
10	pH	7.7				8.3
	O2 ppm	8.9				9.2
	Cond.	527				538
	Temp(C)	15.0	14.5	14.0	14.5	14.5
Control	pH	7.8				8.3
	O2 ppm	8.9				8.9
	Cond.	568				553
	Temp(C)	15.0	14.5	14.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900030

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/16/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900030

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.3
	O2 ppm	11.2				9.4
	Cond.	355				362
	Temp(C)	14.0	15.0	15.0	14.0	14.0
65	pH	8.0				8.4
	O2 ppm	10.4				9.3
	Cond.	424				431
	Temp(C)	14.5	15.0	15.0	14.0	14.0
40	pH	8.0				8.4
	O2 ppm	10.2				9.2
	Cond.	479				483
	Temp(C)	15.0	15.0	15.0	14.0	14.0
20	pH	8.0				8.4
	O2 ppm	9.7				9.3
	Cond.	516				517
	Temp(C)	15.5	15.0	15.0	14.0	14.0
10	pH	8.0				8.4
	O2 ppm	9.3				9.4
	Cond.	539				531
	Temp(C)	16.0	15.0	15.0	14.0	14.0
5	pH	8.0				8.5
	O2 ppm	9.4				9.3
	Cond.	544				542
	Temp(C)	16.0	15.0	15.0	14.0	14.0
Control	pH	8.0				8.5
	O2 ppm	9.2				9.1
	Cond.	547				544
	Temp(C)	16.0	15.0	15.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900089

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: #2 Rod Mill, (1100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 02/06/90
Received	: 02/06/90
Tested	: 02/07/90 at: 1200
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	1	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900089

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.2
	O2 ppm	10.0				9.6
	Cond.	348				357
	Temp(C)	15.0	15.0	15.0	15.0	14.0
100	pH	8.0				8.0
	O2 ppm	10.0				9.2
	Cond.	348				356
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.6
	O2 ppm	8.3				9.8
	Cond.	536				530
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.3				9.6
	Cond.	536				535
	Temp(C)	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900179

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1120

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single test concentration; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900179

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.0
	O2 ppm	11.4				8.8
	Cond.	346				373
	Temp(C)	15.0	14.0	14.0	15.0	15.0
100	pH	8.1				8.1
	O2 ppm	11.4				9.2
	Cond.	346				370
	Temp(C)	15.0	14.0	14.0	15.0	15.0
Control	pH	7.8				8.5
	O2 ppm	9.5				9.1
	Cond.	547				530
	Temp(C)	15.0	14.0	14.0	15.0	15.0
Control	pH	7.8				8.2
	O2 ppm	9.5				8.2
	Cond.	547				534
	Temp(C)	15.0	14.0	14.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900055

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 04/01/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME									TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	23:30	45:30	70:00	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900055

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	23:30	45:30	70:00	96:0
100	pH	7.5			7.9		7.9	7.9	7.9	8.
	O2 ppm	11.0			10.0		9.7	10.0	10.0	10.
	Cond.	245			265		265	265	265	27
	Temp(C)	15.0			15.0		15.0	15.0	15.0	15.
65	pH				7.9		7.9	7.9	8.0	7.
	O2 ppm				10.3		9.8	10.0	10.0	10.
	Cond.				270		265	265	265	28
	Temp(C)				15.0		15.0	15.0	15.0	15.
40	pH				7.8		7.8	7.8	7.8	7.
	O2 ppm				10.1		9.7	9.9	9.9	10.
	Cond.				270		265	270	270	27
	Temp(C)				15.0		15.0	15.0	15.0	15.
30	pH				7.8		7.9	7.9	7.9	7.
	O2 ppm				10.3		9.8	10.1	10.1	10.
	Cond.				270		265	270	270	27
	Temp(C)				15.0		15.0	15.0	15.0	15.
20	pH				7.8		7.9	7.9	7.9	7.
	O2 ppm				10.3		9.8	10.0	10.1	10.
	Cond.				270		270	270	270	27
	Temp(C)				15.0		15.0	15.0	15.0	15.
10	pH				7.7		7.9	7.9	7.9	7.
	O2 ppm				10.1		9.9	10.0	10.0	9.
	Cond.				250		270	270	270	27
	Temp(C)				15.0		15.0	15.0	15.0	15.
Control	pH				7.7		7.9	7.8	7.9	7.
	O2 ppm				10.4		9.9	9.9	10.0	9.
	Cond.				275		270	275	275	26
	Temp(C)				15.0		15.0	15.0	15.0	15.

MISA Trout

TOXICITY TEST REPORT Sample: 03900269

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900269

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.6				9.8
	Cond.	354				349
	Temp(C)	15.0	14.5	14.0	14.5	14.0
100	pH	8.1				7.9
	O2 ppm	10.6				9.5
	Cond.	354				351
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.3
	O2 ppm	9.0				9.6
	Cond.	544				542
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.0				9.8
	Cond.	544				538
	Temp(C)	15.0	14.5	14.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900343

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1135

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900343

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.2				7.9
	O2 ppm	10.2				8.5
	Cond.	374				380
	Temp(C)	15.5	15.0	15.0	14.5	15.0
100	pH	8.2				8.1
	O2 ppm	10.2				8.0
	Cond.	374				382
	Temp(C)	15.5	15.0	15.0	14.5	15.0
Control	pH	7.9				8.3
	O2 ppm	9.7				9.0
	Cond.	551				529
	Temp(C)	15.5	15.0	15.0	14.5	15.0
Control	pH	7.9				8.3
	O2 ppm	9.7				8.7
	Cond.	551				538
	Temp(C)	15.5	15.0	15.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900443

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1515

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900443

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.9
	O2 ppm	9.7				8.2
	Cond.	356				359
	Temp(C)	15.0	16.0	15.5	16.0	16.0
100	pH	8.1				7.9
	O2 ppm	9.7				8.1
	Cond.	356				358
	Temp(C)	15.0	16.0	15.5	16.0	16.0
Control	pH	7.8				8.2
	O2 ppm	8.3				8.3
	Cond.	545				531
	Temp(C)	15.0	16.0	15.5	16.0	16.0
Control	pH	7.8				8.3
	O2 ppm	8.3				8.4
	Cond.	545				537
	Temp(C)	15.0	16.0	15.5	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900550

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: #2 Rod Mill, (1100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 07/03/90
Received	: 07/03/90
Tested	: 07/04/90 at: 1200
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900550

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.2				7.8
	O2 ppm	10.0				7.6
	Cond.	365				368
	Temp(C)	15.5	15.0	15.5	16.0	15.5
100	pH	8.2				7.8
	O2 ppm	10.0				8.6
	Cond.	365				365
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.8				8.1
	O2 ppm	9.6				8.2
	Cond.	536				536
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.8				8.1
	O2 ppm	9.6				7.4
	Cond.	536				539
	Temp(C)	15.5	15.0	15.5	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890267

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/15/89 at: 1330

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890267

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.6					8.4
	O2 ppm	7.5					9.8
	Cond.	558					565
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
10	pH	7.6					8.4
	O2 ppm	7.5					9.2
	Cond.	563					566
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
20	pH	7.7					8.4
	O2 ppm	7.7					9.7
	Cond.	569					569
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
40	pH	7.6					8.4
	O2 ppm	7.9					9.6
	Cond.	578					587
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
65	pH	7.7					8.4
	O2 ppm	8.8					9.5
	Cond.	596					598
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
100	pH	7.7					8.1
	O2 ppm	9.3					9.5
	Cond.	615					601
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890322

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890322

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7				8.0
	O2 ppm	9.3				9.3
	Cond.	560				574
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.7				8.1
	O2 ppm	9.2				9.3
	Cond.	561				570
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.7				8.2
	O2 ppm	9.2				9.2
	Cond.	562				569
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.7				8.2
	O2 ppm	9.3				9.2
	Cond.	559				566
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.7				8.3
	O2 ppm	9.2				9.4
	Cond.	565				560
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.7				8.4
	O2 ppm	9.1				9.4
	Cond.	564				554
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900029

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/16/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900029

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	11.0				9.2
	Cond.	585				589
	Temp(C)	14.0	15.0	15.0	14.0	14.0
65	pH	7.9				8.3
	O2 ppm	10.6				9.1
	Cond.	577				575
	Temp(C)	14.5	15.0	15.0	14.0	14.0
40	pH	7.9				8.3
	O2 ppm	10.2				9.2
	Cond.	567				568
	Temp(C)	15.0	15.0	15.0	14.0	14.0
20	pH	8.0				8.4
	O2 ppm	9.9				9.3
	Cond.	561				564
	Temp(C)	15.5	15.0	15.0	14.0	14.0
10	pH	8.0				8.4
	O2 ppm	9.8				9.4
	Cond.	558				563
	Temp(C)	16.0	15.0	15.0	14.0	14.0
5	pH	8.0				8.5
	O2 ppm	9.6				9.4
	Cond.	554				553
	Temp(C)	16.0	15.0	15.0	14.0	14.0
Control	pH	8.0				8.5
	O2 ppm	9.5				9.3
	Cond.	551				550
	Temp(C)	16.0	15.0	15.0	14.0	14.0

NISA Trout

TOXICITY TEST REPORT Sample: 03900090

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900090

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.2
	O2 ppm	9.5				9.5
	Cond.	667				670
	Temp(C)	15.0	15.0	15.0	15.0	14.0
100	pH	7.8				7.8
	O2 ppm	9.5				8.4
	Cond.	667				672
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.3				9.3
	Cond.	536				538
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.2
	O2 ppm	8.3				8.6
	Cond.	536				543
	Temp(C)	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900180

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peldl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1125

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single test concentration; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900180

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	11.3				9.0
	Cond.	702				726
	Temp(C)	15.0	14.0	14.0	15.0	15.0
100	pH	8.0				8.1
	O2 ppm	11.3				9.1
	Cond.	702				722
	Temp(C)	15.0	14.0	14.0	15.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.6				9.1
	Cond.	539				533
	Temp(C)	15.0	14.0	14.0	15.0	15.0
Control	pH	7.9				8.2
	O2 ppm	9.6				8.5
	Cond.	539				535
	Temp(C)	15.0	14.0	14.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900270

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Piedl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1205

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	1	1	1	1	10
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; 5% mort. @ 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900270

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.8				9.7
	Cond.	729				715
	Temp(C)	15.0	14.5	14.0	14.0	14.0
100	pH	8.0				8.1
	O2 ppm	9.8				9.7
	Cond.	729				716
	Temp(C)	15.0	14.5	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.8
	Cond.	527				528
	Temp(C)	15.0	14.5	14.0	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	9.1				9.4
	Cond.	527				523
	Temp(C)	15.0	14.5	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900049

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 60 inch Sewer, (1300)

Laboratory : MOE
Sampling Method : Grab
Sampled By : B. Trach
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/30/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME									TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	28:30	50:00	70:00	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900049

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	28:30	50:00	70:00	96:0
100	pH	7.8		8.0			7.9	7.9	8.0	7.
	O2 ppm	12.1		10.0			9.9	10.4	10.1	10.
	Cond.	460		490			495	490	490	48
	Temp(C)	15.0		15.0			15.0	15.0	15.0	15.
65	pH			8.1			7.8	7.8	8.0	7.
	O2 ppm			9.9			9.7	10.3	10.0	10.
	Cond.			416			420	410	420	41
	Temp(C)			15.0			15.0	15.0	15.0	15.
40	pH			8.0			7.6	7.8	7.7	7.
	O2 ppm			9.9			8.7	10.1	9.9	9.
	Cond.			360			365	360	365	36
	Temp(C)			15.0			15.0	15.0	15.0	15.
30	pH			7.9			7.9	7.8	7.9	7.
	O2 ppm			10.0			9.9	10.4	10.1	10.
	Cond.			334			335	335	335	33
	Temp(C)			15.0			15.0	15.0	15.0	15.
20	pH			7.9			7.9	7.7	7.9	7.
	O2 ppm			9.9			9.8	10.3	10.0	10.
	Cond.			310			315	310	315	31
	Temp(C)			15.0			15.0	15.0	15.0	15.
10	pH			7.8			7.7	7.7	7.8	7.
	O2 ppm			9.8			9.6	10.1	9.8	9.
	Cond.			290			290	285	290	28
	Temp(C)			15.0			15.0	15.0	15.0	15.
Control	pH			7.8			7.7	7.4	7.9	7.
	O2 ppm			9.9			9.8	10.0	9.8	9.
	Cond.			265			290	260	270	26
	Temp(C)			15.0			15.0	15.0	15.0	15.

MISA Trout

TOXICITY TEST REPORT — Sample: 03900267

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: #2 60 inch Sewer, (1300)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 04/03/90
Received	: 04/03/90
Tested	: 04/04/90 at: 1450
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900267

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.5				7.7
	O2 ppm	9.6				8.0
	Cond.	685				696
	Temp(C)	15.0	14.5	15.0	14.5	15.0
65	pH	8.2				8.2
	O2 ppm	9.3				9.4
	Cond.	636				640
	Temp(C)	15.0	14.5	15.0	14.5	15.0
40	pH	8.0				8.3
	O2 ppm	9.3				9.5
	Cond.	605				599
	Temp(C)	15.0	14.5	15.0	14.5	15.0
20	pH	8.0				8.4
	O2 ppm	9.3				9.7
	Cond.	568				565
	Temp(C)	15.0	14.5	15.0	14.5	15.0
10	pH	8.0				8.4
	O2 ppm	9.2				9.6
	Cond.	557				550
	Temp(C)	15.0	14.5	15.0	14.5	15.0
5	pH	8.0				8.4
	O2 ppm	9.3				9.5
	Cond.	549				542
	Temp(C)	15.0	14.5	15.0	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	8.9				9.6
	Cond.	533				533
	Temp(C)	15.0	14.5	15.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900557

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 60 inch Sewer, (1300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1605

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900557

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				7.7
	O2 ppm	9.3				8.3
	Cond.	654				642
	Temp(C)	15.5	15.5	15.5	16.0	15.5
65	pH	8.0				7.8
	O2 ppm	9.7				8.3
	Cond.	608				600
	Temp(C)	15.5	15.5	15.5	16.0	15.5
40	pH	7.9				8.3
	O2 ppm	9.7				9.0
	Cond.	581				567
	Temp(C)	15.5	15.5	15.5	16.0	15.5
20	pH	7.9				8.1
	O2 ppm	9.7				8.4
	Cond.	551				548
	Temp(C)	15.5	15.5	15.5	16.0	15.5
10	pH	7.8				8.4
	O2 ppm	9.7				9.1
	Cond.	540				532
	Temp(C)	15.5	15.5	15.5	16.0	15.5
5	pH	7.8				8.2
	O2 ppm	9.7				8.6
	Cond.	538				535
	Temp(C)	15.5	15.5	15.5	16.0	15.5
Control	pH	7.8				8.1
	O2 ppm	9.7				8.2
	Cond.	534				529
	Temp(C)	15.5	15.5	15.5	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 0390068

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 60 inch Sewer, (1300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1425

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900684

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.9				8.0
	O2 ppm	8.8				7.8
	Cond.	571				575
	Temp(C)	16.0	15.5	15.0	15.5	15.5
65	pH	8.4				8.1
	O2 ppm	8.7				8.9
	Cond.	559				560
	Temp(C)	16.0	15.5	15.0	15.5	15.5
40	pH	8.1				8.3
	O2 ppm	8.6				8.9
	Cond.	548				546
	Temp(C)	16.0	15.5	15.0	15.5	15.5
20	pH	8.0				8.3
	O2 ppm	8.6				9.0
	Cond.	542				541
	Temp(C)	16.0	15.5	15.0	15.5	15.5
10	pH	7.9				8.3
	O2 ppm	8.4				9.0
	Cond.	540				540
	Temp(C)	16.0	15.5	15.0	15.5	15.5
5	pH	7.9				8.3
	O2 ppm	8.4				9.0
	Cond.	538				537
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.9				8.4
	O2 ppm	8.4				9.1
	Cond.	537				534
	Temp(C)	16.0	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900189

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Intake Water, (1600)

Laboratory : BAR
Sampling Method : Grab
Sampled By : J. Tegler
Date Collected : 03/09/90
Received : 03/09/90
Tested : 03/09/90 at: 1610

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900189

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.2
	O2 ppm	11.0				9.9
	Cond.	721				726
	Temp(C)	15.0	14.0	15.0	15.0	15.5
65	pH	8.0				8.3
	O2 ppm	9.8				9.8
	Cond.	660				659
	Temp(C)	15.0	14.0	15.0	15.0	15.5
40	pH	8.0				8.3
	O2 ppm	9.4				9.7
	Cond.	608				614
	Temp(C)	15.0	14.0	15.0	15.0	15.5
20	pH	7.9				8.4
	O2 ppm	9.2				9.7
	Cond.	571				575
	Temp(C)	15.0	14.0	15.0	15.0	15.5
10	pH	7.9				8.4
	O2 ppm	9.1				9.8
	Cond.	554				549
	Temp(C)	15.0	14.0	15.0	15.0	15.5
5	pH	7.9				8.4
	O2 ppm	8.7				9.7
	Cond.	543				543
	Temp(C)	15.0	14.0	15.0	15.0	15.5
Control	pH	7.9				8.4
	O2 ppm	8.6				10.0
	Cond.	534				526
	Temp(C)	15.0	14.0	15.0	15.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890264

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/15/89 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890264

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.6					8.5
	O2 ppm	7.1					9.3
	Cond.	560					561
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
10	pH	7.6					8.4
	O2 ppm	7.1					9.3
	Cond.	564					569
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
20	pH	7.6					8.4
	O2 ppm	7.2					9.1
	Cond.	566					571
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
40	pH	7.6					8.4
	O2 ppm	7.5					9.2
	Cond.	574					583
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
65	pH	7.6					8.3
	O2 ppm	7.8					9.3
	Cond.	602					606
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
100	pH	7.6					8.1
	O2 ppm	8.1					9.3
	Cond.	610					610
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890323

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1130

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Nonlethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890323

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.6				8.1
	O2 ppm	8.8				9.3
	Cond.	611				630
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.6				8.1
	O2 ppm	8.8				9.2
	Cond.	596				608
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.7				8.3
	O2 ppm	8.8				9.2
	Cond.	584				595
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.7				8.1
	O2 ppm	8.8				9.0
	Cond.	577				585
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.6				8.4
	O2 ppm	8.8				9.4
	Cond.	573				574
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.6				8.4
	O2 ppm	8.9				9.4
	Cond.	571				569
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900027

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/16/90 at: 1700

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Nonlethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900027

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.6				8.0
	O2 ppm	9.1				9.1
	Cond.	661				670
	Temp(C)	15.0	15.0	15.0	14.0	14.0
65	pH	7.8				8.2
	O2 ppm	9.2				9.0
	Cond.	616				624
	Temp(C)	15.0	15.0	15.0	14.0	14.0
40	pH	7.9				8.3
	O2 ppm	8.5				9.1
	Cond.	592				605
	Temp(C)	15.0	15.0	15.0	14.0	14.0
20	pH	7.9				8.3
	O2 ppm	8.8				9.0
	Cond.	573				585
	Temp(C)	15.0	15.0	15.0	14.0	14.0
10	pH	8.0				8.4
	O2 ppm	8.4				9.0
	Cond.	565				567
	Temp(C)	15.0	15.0	15.0	14.0	14.0
5	pH	8.0				8.4
	O2 ppm	8.7				8.9
	Cond.	556				559
	Temp(C)	15.0	15.0	15.0	14.0	14.0
Control	pH	7.9				8.3
	O2 ppm	9.2				8.9
	Cond.	550				558
	Temp(C)	15.0	15.0	15.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900177

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single test concentration; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900177

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.9
	O2 ppm	9.4				8.8
	Cond.	723				760
	Temp(C)	15.0	14.0	14.0	15.0	14.5
100	pH	7.7				8.0
	O2 ppm	9.4				8.9
	Cond.	723				758
	Temp(C)	15.0	14.0	14.0	15.0	14.5
Control	pH	7.9				8.4
	O2 ppm	9.5				9.1
	Cond.	548				546
	Temp(C)	15.0	14.0	14.0	15.0	14.5
Control	pH	7.9				8.2
	O2 ppm	9.5				8.7
	Cond.	548				548
	Temp(C)	15.0	14.0	14.0	15.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 01900053

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/30/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY		
%	00:00	00:30	01:00	02:00	04:00	29:30	50:00	1:00	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900053

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	29:30	50:00	71:00	96:0
100	pH	7.2	7.6				7.8	7.8	7.8	7.
	O2 ppm	8.7	9.9				9.9	10.3	9.8	9.
	Cond.	560	560				550	550	560	53
	Temp(C)	15.0	15.0				15.0	15.0	15.0	15.
65	pH		7.7				7.8	7.8	7.9	7.
	O2 ppm		9.8				9.8	10.3	9.8	9.
	Cond.		470				465	455	465	45
	Temp(C)		15.0				15.0	15.0	15.0	15.
40	pH		7.7				7.7	7.8	7.9	7.
	O2 ppm		9.9				9.7	10.4	9.8	10.
	Cond.		390				390	395	390	39
	Temp(C)		15.0				15.0	15.0	15.0	15.
30	pH		7.7				7.8	7.7	7.8	7.
	O2 ppm		10.0				9.9	10.2	9.8	9.
	Cond.		365				365	365	365	36
	Temp(C)		15.0				15.0	15.0	15.0	15.
20	pH		7.7				7.8	7.7	7.8	7.
	O2 ppm		9.9				9.7	10.3	9.7	9.
	Cond.		330				330	330	335	33
	Temp(C)		15.0				15.0	15.0	15.0	15.
10	pH		7.8				7.8	7.5	7.8	7.
	O2 ppm		10.0				9.9	10.1	9.8	10.
	Cond.		310				310	280	315	30
	Temp(C)		15.0				15.0	15.0	15.0	15.
Control	pH		7.8				7.7	7.8	7.9	7.
	O2 ppm		9.9				10.1	10.3	9.9	9.
	Cond.		275				270	275	275	25
	Temp(C)		15.0				15.0	15.0	15.0	15.

NISA Trout

TOXICITY TEST REPORT Sample: 03900265

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1050

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900265

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.0
	O2 ppm	8.6				9.6
	Cond.	773				770
	Temp(C)	15.0	14.5	14.0	14.5	14.0
100	pH	7.8				7.9
	O2 ppm	8.6				9.4
	Cond.	773				773
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.9				9.7
	Cond.	545				517
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.9				9.7
	Cond.	545				518
	Temp(C)	15.0	14.5	14.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900345

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900345

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.1
	O2 ppm	8.6				9.5
	Cond.	806				798
	Temp(C)	15.5	15.0	14.5	14.5	14.5
100	pH	7.8				8.1
	O2 ppm	8.6				9.5
	Cond.	806				808
	Temp(C)	15.5	15.0	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.4				9.6
	Cond.	551				503
	Temp(C)	15.5	15.0	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.4				9.5
	Cond.	551				518
	Temp(C)	15.5	15.0	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900444

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter Stage 1, (1900)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 06/05/90
Received	: 06/05/90
Tested	: 06/06/90 at: 1525
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900444

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.5				7.8
	O2 ppm	7.7				8.1
	Cond.	740				754
	Temp(C)	15.0	16.0	15.5	16.0	16.0
100	pH	7.5				7.8
	O2 ppm	7.7				8.0
	Cond.	740				756
	Temp(C)	15.0	16.0	15.5	16.0	16.0
Control	pH	7.8				8.4
	O2 ppm	8.2				8.2
	Cond.	543				530
	Temp(C)	15.0	16.0	15.5	16.0	16.0
Control	pH	7.8				8.4
	O2 ppm	8.2				8.2
	Cond.	543				532
	Temp(C)	15.0	16.0	15.5	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900554

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1415

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900554

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.4				7.8
	O2 ppm	8.2				8.5
	Cond.	732				718
	Temp(C)	15.5	15.0	14.5	15.0	15.0
100	pH	7.4				7.6
	O2 ppm	8.2				8.2
	Cond.	732				723
	Temp(C)	15.5	15.0	14.5	15.0	15.0
Control	pH	7.9				8.1
	O2 ppm	9.9				8.1
	Cond.	534				529
	Temp(C)	15.5	15.0	14.5	15.0	15.0
Control	pH	7.9				8.2
	O2 ppm	9.9				8.7
	Cond.	534				532
	Temp(C)	15.5	15.0	14.5	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900685

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. ONE, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900685

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.0
	O2 ppm	8.2				9.0
	Cond.	626				633
	Temp(C)	16.0	15.5	15.0	15.5	15.5
100	pH	7.9				8.0
	O2 ppm	8.2				9.0
	Cond.	626				635
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.8				8.3
	O2 ppm	8.4				9.1
	Cond.	535				541
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.8				8.3
	O2 ppm	8.4				9.0
	Cond.	535				541
	Temp(C)	16.0	15.5	15.0	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03890265

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/16/89 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890265

TEST CONC.		ELAPSED TIME					
%		00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.8					8.5
	O2 ppm	8.8					9.3
	Cond.	561					547
	Temp(C)	15.5	15.0	14.0	14.0	14.0	15.0
10	pH	7.9					8.6
	O2 ppm	8.8					9.5
	Cond.	566					559
	Temp(C)	15.5	15.0	14.0	14.0	14.0	15.0
20	pH	7.8					8.5
	O2 ppm	8.7					9.5
	Cond.	568					564
	Temp(C)	15.5	15.0	14.0	14.0	14.0	15.0
40	pH	7.8					8.4
	O2 ppm	8.9					9.4
	Cond.	570					576
	Temp(C)	15.5	15.0	14.0	14.0	14.0	15.0
65	pH	7.8					8.3
	O2 ppm	8.9					9.2
	Cond.	579					587
	Temp(C)	15.5	15.0	14.0	14.0	14.0	15.0
100	pH	7.7					8.2
	O2 ppm	9.0					9.3
	Cond.	592					602
	Temp(C)	15.5	15.0	14.0	14.0	14.0	15.0

NISA Trout

TOXICITY TEST REPORT Sample: 03900178

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single test concentration; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900178

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.9
	O2 ppm	9.4				8.7
	Cond.	725				766
	Temp(C)	15.0	14.0	14.0	15.0	15.0
100	pH	7.7				8.1
	O2 ppm	9.4				9.0
	Cond.	725				761
	Temp(C)	15.0	14.0	14.0	15.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.4				9.1
	Cond.	545				529
	Temp(C)	15.0	14.0	14.0	15.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.4				9.2
	Cond.	545				528
	Temp(C)	15.0	14.0	14.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900052

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/30/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	29:00	70:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900052

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	04:00	29:00	70:00	96:00
100	pH	7.3		7.8			7.9	8.0	7.9
	O2 ppm	8.2		9.8			9.9	9.8	9.8
	Cond.	560		560			560	570	560
	Temp(C)	15.0		15.0			15.0	15.0	15.0
65	pH			7.7			7.8	7.8	7.9
	O2 ppm			9.6			9.6	9.6	9.7
	Cond.			475			470	475	465
	Temp(C)			15.0			15.0	15.0	15.0
40	pH			7.8			7.9	8.0	8.0
	O2 ppm			9.8			9.9	9.8	9.8
	Cond.			395			395	400	400
	Temp(C)			15.0			15.0	15.0	15.0
30	pH			7.8			7.9	8.0	7.9
	O2 ppm			9.8			9.9	9.8	9.9
	Cond.			365			365	370	365
	Temp(C)			15.0			15.0	15.0	15.0
20	pH			7.7			7.7	7.9	7.8
	O2 ppm			9.7			9.6	9.8	9.9
	Cond.			335			335	340	340
	Temp(C)			15.0			15.0	15.0	15.0
10	pH			7.8			7.8	7.9	7.8
	O2 ppm			9.8			9.6	9.8	9.9
	Cond.			310			310	315	310
	Temp(C)			15.0			15.0	15.0	15.0
Control	pH			7.8			7.5	7.8	7.6
	O2 ppm			9.9			9.4	9.8	9.6
	Cond.			265			265	270	265
	Temp(C)			15.0			15.0	15.0	15.0

NISA Trout

TOXICITY TEST REPORT Sample: 03900266

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1125

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	1	1	2	2	
100	0	0	0	0	0	20
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0
						0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; 10% mort. @ 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900266

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				7.9
	O2 ppm	8.5				9.3
	Cond.	774				788
	Temp(C)	15.0	14.5	14.0	14.5	14.0
100	pH	7.9				8.0
	O2 ppm	8.5				9.4
	Cond.	774				787
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.6
	Cond.	534				524
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.3
	O2 ppm	9.1				9.4
	Cond.	534				527
	Temp(C)	15.0	14.5	14.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900346

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter Stage 2, (2000)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Johnston
Date Collected	: 05/01/90
Received	: 05/01/90
Tested	: 05/02/90 at: 1445
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900346

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.2
	O2 ppm	8.1				9.7
	Cond.	805				805
	Temp(C)	15.5	15.0	15.0	14.5	14.5
100	pH	7.8				8.2
	O2 ppm	8.1				9.8
	Cond.	805				809
	Temp(C)	15.5	15.0	15.0	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.4				9.9
	Cond.	553				504
	Temp(C)	15.5	15.0	15.0	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.4				9.9
	Cond.	553				528
	Temp(C)	15.5	15.0	15.0	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900445

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1520

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900445

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.6				7.8
	O2 ppm	7.9				8.3
	Cond.	779				760
	Temp(C)	15.0	15.5	15.5	16.0	16.0
100	pH	7.6				7.9
	O2 ppm	7.9				8.5
	Cond.	779				763
	Temp(C)	15.0	15.5	15.5	16.0	16.0
Control	pH	7.8				8.3
	O2 ppm	8.3				8.5
	Cond.	541				530
	Temp(C)	15.0	15.5	15.5	16.0	16.0
Control	pH	7.8				8.5
	O2 ppm	8.3				8.8
	Cond.	541				527
	Temp(C)	15.0	15.5	15.5	16.0	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900555

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter Stage 2, (2000)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 07/03/90
Received	: 07/03/90
Tested	: 07/04/90 at: 1410
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900555

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.3				7.7
	O2 ppm	7.5				8.8
	Cond.	736				726
	Temp(C)	15.5	15.0	14.5	15.0	15.0
100	pH	7.3				7.8
	O2 ppm	7.5				8.8
	Cond.	736				736
	Temp(C)	15.5	15.0	14.5	15.0	15.0
Control	pH	7.9				8.3
	O2 ppm	9.8				9.1
	Cond.	531				530
	Temp(C)	15.5	15.0	14.5	15.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.8				9.2
	Cond.	531				531
	Temp(C)	15.5	15.0	14.5	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900686

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1435

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900686

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.0
	O2 ppm	8.5				9.0
	Cond.	618				629
	Temp(C)	16.0	15.5	15.0	15.5	15.5
100	pH	7.9				8.0
	O2 ppm	8.5				9.1
	Cond.	618				624
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.2				9.0
	Cond.	538				538
	Temp(C)	16.0	15.5	15.0	15.5	15.5
Control	pH	7.9				8.3
	O2 ppm	8.2				9.0
	Cond.	538				537
	Temp(C)	16.0	15.5	15.0	15.5	15.5

COMPANY: Stelco Steel Hilton Works, Hamilton (950006)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY

Data for 74 Daphnia magna acute lethality toxicity tests conducted on samples from nine different sampling points collected between November 1989 and August 1990 were submitted by Stelco Steel Hilton Works of Hamilton. This plant was shut down between August and September due to a labour dispute therefore there were no test results submitted for these months.

Samples from west side open cut (100), northwest outfall (200) and #2 60 inch sewer (1300) were either not acutely lethal to Daphnia, or had LC50s > 100%. Audit testing conducted by the Ministry indicated samples from outfall #100 and #200 were not acutely lethal to Daphnia. A test conducted in the Ministry laboratory on a sample from outfall #1300 collected in March had a 48 h LC50 > 100%.

Eight of ten samples from east side filter stage 1 (1900) were not acutely lethal to Daphnia. Ona sample had an LC50 > 100% and the January sample induced the unusual toxicity curve (bell shaped) described for some effluents from Dofasco. Five of ten samples from east side filter stage 2 (2000) were not acutely lethal to Daphnia and three samples had LC50s > 100 %. Two samples (January and March) induced the bell shaped toxicity curve. Ministry audits of these outfalls conducted on samples collected in March indicated the samples were not acutely lethal to Daphnia.

Five of ten samples from north outfall (400) and two of four samples from east side filter (601) were not acutely lethal to Daphnia. One sample from each had a bell shaped lethality curve, and the remaining samples had LC50s > 100 %. Ministry audit tests of each of these outfalls were nonlethal.

#1 60 inch sewer (602), #2 rod mill (1100), and 20 inch mill (1200) effluents were the most toxic from this company. Three samples from the #1 60 " sewer were nonlethal, three samples had LC50s > 100 % and the November sample induced the unusual bell curve response. The remaining three samples had 48 h LC50s of 50, 56 and 70 % effluent. There were two nonlethal samples from the #2 rod mill and none from the 20 " mill. Two samples from the #2 rod mill had LC50s > 100%, and the November sample induced the bell shaped lethality response. The remaining four samples had 48 h LC50s of 41, 54, 78 and 84 % effluent. Four samples from the 20" mill had LC50s > 100 %, and the remaining two samples generated LC50s of 12 and 32 % effluent. Sample tested in the Ministry laboratory in March were not acutely lethal to Daphnia.

West Side Open Cut

03900031 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non Lethal

02900057 sampled: 03/28/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

03900262 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900350 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900439 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900591 sampled: 07/10/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900680 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Northwest Outfall

03900032 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non Lethal

02900056 sampled: 03/28/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

03900263 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900367 sampled: 05/08/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900440 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900556 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900681 sampled: 08/14/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

North Outfall

03890263 sampled: 11/14/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890320 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900033 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900088 sampled: 02/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900175 sampled: 03/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

02900058 sampled: 03/28/90 LC50: 5.0 - 15.0 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900264 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900348 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900441 sampled: 06/05/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900552 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900682 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

East Side Filter

03890323 sampled: 12/05/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890319 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900027 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900028 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900086 sampled: 02/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900085 sampled: 02/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

#1 60 inch Sewer

03890268 sampled: 11/14/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890318 sampled: 12/05/89 LC50: 70.7 %
95% fid. limits: 50.0 - 100.0 %
comments:

03900067 sampled: 01/24/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900091 sampled: 02/06/90 LC50: 49.7 %
95% fid. limits: 36.9 - 66.9 % slope: 3.8
comments: Lethal

03900176 sampled: 03/06/90 LC50: 56.1 %
95% fid. limits: 44.0 - 71.3 %
comments: Lethal

02900050 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: High DO

03900268 sampled: 04/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900344 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900442 sampled: 06/05/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900551 sampled: 07/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900683 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

#2 Rod Mill

03890266 sampled: 11/14/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890321 sampled: 12/05/89 LC50: 84.6 %
95% fid. limits: 59.3 - 120.5 % slope: 3.2
comments:

03900030 sampled: 01/16/90 LC50: 78.0 %
95% fid. limits: 65.1 - 93.4 % slope: 9.0
comments: Lethal

03900089 sampled: 02/06/90 LC50: 41.2 %
95% fid. limits: 31.5 - 53.8 % slope: 4.3
comments: Lethal

03900179 sampled: 03/06/90 LC50: 54.4 %
95% fid. limits: 42.0 - 70.6 % slope: 5.7
comments: Lethal

02900055 sampled: 03/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Many floaters at 60% and 100%.

03900269 sampled: 04/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900343 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900443 sampled: 06/05/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900550 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

20 inch Mill

03890267 sampled: 11/14/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100%

03890322 sampled: 12/05/89 LC50: 11.9 %
95% fid. limits: 6.3 - 22.4 %
comments:

03900029 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900090 sampled: 02/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900180 sampled: 03/06/90 LC50: 32.2 %
95% fid. limits: 16.5 - 81.4 % slope: 1.3
comments: Lethal

03900270 sampled: 04/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

#2 60 inch Sewer

02900049 sampled: 03/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

03900267 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900557 sampled: 07/03/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900684 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

East Side Filter OW

Rain Gauge

Intake Water

East Side Filter Stage 1

03890264 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900177 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

02900053 sampled: 03/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900265 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900345 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900444 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900554 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900685 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

East Side Filter Stage 2

03890265 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900178 sampled: 03/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Lethal; No concentration:effect relationship

02900052 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900266 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900346 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900445 sampled: 06/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900555 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900686 sampled: 08/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900031

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 950

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900031

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.6		8.2
	O2 ppm	9.3		8.6
	Cond.	745		743
	Temp(C)	20.0	19.0	20.0
50	pH	8.5		8.3
	O2 ppm	9.0		8.7
	Cond.	523		521
	Temp(C)	20.0	19.0	20.0
25	pH	8.5		8.3
	O2 ppm	8.8		8.8
	Cond.	410		411
	Temp(C)	20.0	19.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.8		8.9
	Cond.	357		360
	Temp(C)	20.0	19.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.8		8.8
	Cond.	327		330
	Temp(C)	20.0	19.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.8		8.8
	Cond.	296		297
	Temp(C)	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900057

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 03/30/90 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	1	8
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900057

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	8.3	8.1
	O2 ppm	9.8	8.1
	Cond.	818	806
	Temp(C)	20.0	20.0
60	pH	8.2	8.0
	O2 ppm	9.4	8.3
	Cond.	621	612
	Temp(C)	20.0	20.0
30	pH	8.0	8.0
	O2 ppm	9.2	8.4
	Cond.	468	463
	Temp(C)	20.0	20.0
15	pH	8.0	7.9
	O2 ppm	9.0	8.4
	Cond.	390	388
	Temp(C)	20.0	20.0
5	pH	7.9	7.9
	O2 ppm	8.9	8.4
	Cond.	342	343
	Temp(C)	20.0	20.0
Control	pH	7.7	7.8
	O2 ppm	9.0	8.4
	Cond.	314	314
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900262

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900262

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.6		8.1
	O2 ppm	8.9		7.4
	Cond.	945		904
	Temp(C)	19.5	19.0	19.5
50	pH	8.5		8.2
	O2 ppm	8.8		8.3
	Cond.	626		607
	Temp(C)	19.5	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.8		8.6
	Cond.	462		448
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.8		8.8
	Cond.	383		371
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		8.8
	Cond.	339		328
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.8
	Cond.	302		293
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900350

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1230

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900350

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.3		8.1
	O2 ppm	9.1		8.6
	Cond.	817		819
	Temp(C)	20.0	20.0	19.0
50	pH	8.3		8.3
	O2 ppm	9.1		8.7
	Cond.	560		561
	Temp(C)	20.0	20.0	19.0
25	pH	8.3		8.3
	O2 ppm	9.1		8.7
	Cond.	433		430
	Temp(C)	20.0	20.0	19.0
13	pH	8.3		8.3
	O2 ppm	9.0		8.9
	Cond.	368		369
	Temp(C)	20.0	20.0	19.0
6	pH	8.3		8.3
	O2 ppm	9.0		8.8
	Cond.	331		333
	Temp(C)	20.0	20.0	19.0
Control	pH	8.4		8.3
	O2 ppm	9.0		9.3
	Cond.	299		304
	Temp(C)	20.0	20.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900439

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1115

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900439

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		7.9
	O2 ppm	8.8		8.4
	Cond.	772		768
	Temp(C)	20.5	19.5	19.5
50	pH	8.2		8.0
	O2 ppm	9.0		8.7
	Cond.	535		737
	Temp(C)	20.5	19.5	19.5
25	pH	8.3		8.1
	O2 ppm	9.0		8.8
	Cond.	414		416
	Temp(C)	20.5	19.5	19.5
13	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	359		361
	Temp(C)	20.5	19.5	19.5
6	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	325		327
	Temp(C)	20.5	19.5	19.5
Control	pH	8.3		8.2
	O2 ppm	9.1		8.8
	Cond.	296		297
	Temp(C)	20.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900591

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: West Side Open Cut, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 07/10/90
Received	: 07/12/90
Tested	: 07/12/90 at: 1535
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. ONE, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	1	1	8
25	0	0	0	0
13	0	1	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900591

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	8.7		8.7
	Cond.	692		690
	Temp(C)	20.5	20.5	19.5
50	pH	8.2		8.2
	O2 ppm	8.9		8.8
	Cond.	497		497
	Temp(C)	20.5	20.5	19.5
25	pH	8.2		8.3
	O2 ppm	9.0		8.8
	Cond.	399		399
	Temp(C)	20.5	20.5	19.5
13	pH	8.2		8.3
	O2 ppm	9.0		8.9
	Cond.	354		354
	Temp(C)	20.5	20.5	19.5
6	pH	8.2		8.3
	O2 ppm	9.0		8.9
	Cond.	329		327
	Temp(C)	20.5	20.5	19.5
Control	pH	8.2		8.3
	O2 ppm	9.0		9.0
	Cond.	308		307
	Temp(C)	20.5	20.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900680

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : West Side Open Cut, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1215

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900680

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.3		8.0
	O2 ppm	9.0		8.5
	Cond.	1074		1079
	Temp(C)	19.5	20.5	20.0
50	pH	8.3		8.1
	O2 ppm	9.1		8.6
	Cond.	680		677
	Temp(C)	19.5	20.5	20.0
25	pH	8.3		8.2
	O2 ppm	9.1		8.6
	Cond.	485		486
	Temp(C)	19.5	20.5	20.0
13	pH	8.3		8.2
	O2 ppm	9.2		8.7
	Cond.	401		402
	Temp(C)	19.5	20.5	20.0
6	pH	8.4		8.2
	O2 ppm	9.1		8.7
	Cond.	339		347
	Temp(C)	19.5	20.5	20.0
Control	pH	8.3		8.2
	O2 ppm	9.2		8.7
	Cond.	289		305
	Temp(C)	19.5	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900032

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(9500006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Piedl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 955

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-Lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900032

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.2		8.8
	Cond.	604		605
	Temp(C)	20.0	19.0	20.0
50	pH	8.2		8.2
	O2 ppm	9.0		8.8
	Cond.	452		451
	Temp(C)	20.0	19.0	20.0
25	pH	8.3		8.3
	O2 ppm	8.9		8.8
	Cond.	374		374
	Temp(C)	20.0	19.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.8		8.8
	Cond.	338		337
	Temp(C)	20.0	19.0	20.0
6	pH	8.3		8.3
	O2 ppm	8.6		8.7
	Cond.	316		315
	Temp(C)	20.0	19.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.8		8.5
	Cond.	296		296
	Temp(C)	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900056

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 03/30/90 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	7	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900056

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	8.0	8.0
	O2 ppm	10.5	8.1
	Cond.	656	636
	Temp(C)	20.0	20.0
60	pH	8.0	7.9
	O2 ppm	9.7	8.2
	Cond.	525	514
	Temp(C)	20.0	20.0
30	pH	7.9	7.8
	O2 ppm	9.4	8.0
	Cond.	420	416
	Temp(C)	20.0	20.0
15	pH	7.9	7.8
	O2 ppm	9.2	8.1
	Cond.	369	367
	Temp(C)	20.0	20.0
5	pH	7.8	7.8
	O2 ppm	9.1	8.5
	Cond.	334	333
	Temp(C)	20.0	20.0
Control	pH	8.0	7.8
	O2 ppm	9.1	8.4
	Cond.	315	316
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900263

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1120

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900263

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.3		8.3
	O2 ppm	9.0		8.5
	Cond.	756		732
	Temp(C)	19.5	19.0	19.5
50	pH	8.3		8.3
	O2 ppm	8.9		8.7
	Cond.	528		509
	Temp(C)	19.5	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	414		401
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	360		348
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	329		317
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.5
	O2 ppm	8.9		8.9
	Cond.	302		294
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900367

TEST CONDITIONS

Company : Stelco Steel Nilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 05/08/90
Received : 05/08/90
Tested : 05/09/90 at: 1205

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	1	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900367

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	8.7		8.4
	Cond.	755		750
	Temp(C)	19.0	20.5	19.0
50	pH	8.1		8.3
	O2 ppm	8.7		8.6
	Cond.	523		528
	Temp(C)	19.0	20.5	19.0
25	pH	8.1		8.3
	O2 ppm	8.7		8.6
	Cond.	413		418
	Temp(C)	19.0	20.5	19.0
13	pH	8.1		8.3
	O2 ppm	8.7		8.7
	Cond.	358		361
	Temp(C)	19.0	20.5	19.0
6	pH	8.2		8.3
	O2 ppm	8.7		8.8
	Cond.	327		334
	Temp(C)	19.0	20.5	19.0
Control	pH	8.3		8.3
	O2 ppm	8.9		8.8
	Cond.	299		305
	Temp(C)	19.0	20.5	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900440

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900440

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.0		8.5
	Cond.	700		721
	Temp(C)	20.5	19.5	19.5
50	pH	8.2		8.0
	O2 ppm	9.1		8.7
	Cond.	496		515
	Temp(C)	20.5	19.5	19.5
25	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	394		408
	Temp(C)	20.5	19.5	19.5
13	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	344		357
	Temp(C)	20.5	19.5	19.5
6	pH	8.3		8.2
	O2 ppm	9.1		8.9
	Cond.	316		328
	Temp(C)	20.5	19.5	19.5
Control	pH	8.3		8.2
	O2 ppm	9.1		8.8
	Cond.	296		297
	Temp(C)	20.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900556

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900556

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.9		7.9
	O2 ppm	9.0		8.0
	Cond.	652		649
	Temp(C)	21.0	20.0	20.0
50	pH	8.1		8.1
	O2 ppm	9.0		8.2
	Cond.	475		480
	Temp(C)	21.0	20.0	20.0
25	pH	8.3		8.2
	O2 ppm	9.0		8.3
	Cond.	386		388
	Temp(C)	21.0	20.0	20.0
13	pH	8.3		8.2
	O2 ppm	9.0		8.3
	Cond.	345		345
	Temp(C)	21.0	20.0	20.0
6	pH	8.3		8.2
	O2 ppm	9.0		8.3
	Cond.	321		322
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	9.2		8.4
	Cond.	297		304
	Temp(C)	21.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900681

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : Northwest Outfall, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1230

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	1	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900681

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.0
	O2 ppm	8.9		8.1
	Cond.	578		576
	Temp(C)	19.5	20.5	20.5
50	pH	8.3		8.1
	O2 ppm	9.1		8.4
	Cond.	430		434
	Temp(C)	19.5	20.5	20.5
25	pH	8.3		8.1
	O2 ppm	9.1		8.5
	Cond.	369		366
	Temp(C)	19.5	20.5	20.5
13	pH	8.3		8.2
	O2 ppm	9.1		8.6
	Cond.	335		332
	Temp(C)	19.5	20.5	20.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.7
	Cond.	311		313
	Temp(C)	19.5	20.5	20.5
Control	pH	8.3		8.1
	O2 ppm	9.2		8.8
	Cond.	289		300
	Temp(C)	19.5	20.5	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890263

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	04:00	24:00	48:00	TOTAL MORTALITY %
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	2	2	16
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890263

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.7
	Cond.	303			295
	Temp(C)	20.0	20.0	19.0	19.5
6	pH	8.0			8.4
	O2 ppm	8.8			9.4
	Cond.	312			328
	Temp(C)	20.0	20.0	19.0	19.5
13	pH	8.0			8.3
	O2	9.0			9.4
	Cond.	334			338
	Temp(C)	20.0	20.0	19.0	19.5
25	pH	8.0			8.3
	O2	9.1			9.3
	Cond.	366			367
	Temp(C)	20.0	20.0	19.0	19.5
50	pH	8.0			8.3
	O2	9.0			9.2
	Cond.	432			428
	Temp(C)	20.0	20.0	19.0	19.5
100	pH	7.9			8.3
	O2	9.0			9.2
	Cond.	557			554
	Temp.(C)	20.0	20.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890320

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1105

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890320

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.1
	O2 ppm	9.4		8.5
	Cond.	575		578
	Temp(C)	19.0	19.0	19.5
50	pH	8.2		8.2
	O2 ppm	9.0		8.8
	Cond.	433		444
	Temp(C)	19.0	19.0	19.5
25	pH	8.3		8.3
	O2 ppm	8.9		8.9
	Cond.	366		376
	Temp(C)	19.0	19.0	19.5
13	pH	8.3		8.3
	O2 ppm	9.0		8.8
	Cond.	333		338
	Temp(C)	19.0	19.0	19.5
6	pH	8.3		8.2
	O2 ppm	9.0		9.0
	Cond.	307		340
	Temp(C)	19.0	19.0	19.5
Control	pH	8.4		8.3
	O2 ppm	8.9		9.0
	Cond.	293		306
	Temp(C)	19.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900033

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	1	10
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900033

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.7		8.3
	O2 ppm	9.2		8.7
	Cond.	593		596
	Temp(C)	20.0	19.0	20.0
50	pH	8.6		8.3
	O2 ppm	9.1		8.8
	Cond.	442		445
	Temp(C)	20.0	19.0	20.0
25	pH	8.5		8.3
	O2 ppm	8.9		8.9
	Cond.	369		374
	Temp(C)	20.0	19.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.9		8.9
	Cond.	337		340
	Temp(C)	20.0	19.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.9		8.8
	Cond.	313		318
	Temp(C)	20.0	19.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.8		8.5
	Cond.	296		292
	Temp(C)	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900088

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	2	16
25	0	0	2	16
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900088

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.7		8.4
	O2 ppm	8.8		8.3
	Cond.	670		671
	Temp(C)	20.0	20.0	20.0
50	pH	8.6		8.4
	O2 ppm	8.6		8.4
	Cond.	484		487
	Temp(C)	20.0	20.0	20.0
25	pH	8.5		8.4
	O2 ppm	8.5		8.4
	Cond.	394		397
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.5		8.5
	Cond.	349		351
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.4
	O2 ppm	8.4		8.4
	Cond.	322		322
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.8
	Cond.	300		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900175

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900175

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.2
	O2 ppm	9.2		8.2
	Cond.	722		729
	Temp(C)	19.5	19.5	20.0
50	pH	8.4		8.3
	O2 ppm	9.0		8.3
	Cond.	513		516
	Temp(C)	19.5	19.5	20.0
25	pH	8.4		8.3
	O2 ppm	8.7		8.4
	Cond.	407		510
	Temp(C)	19.5	19.5	20.0
13	pH	8.5		8.4
	O2 ppm	8.7		8.4
	Cond.	358		360
	Temp(C)	19.5	19.5	20.0
6	pH	8.5		8.4
	O2 ppm	8.7		8.5
	Cond.	329		326
	Temp(C)	19.5	19.5	20.0
Control	pH	8.6		8.4
	O2 ppm	8.9		8.4
	Cond.	298		300
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900058

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/28/90
Received : 03/29/90
Tested : 03/30/90 at: 1300

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	24:00	48:00	%
100	0	0	0	0	12	12	100
60	0	0	0	0	12	12	100
30	0	0	0	0	12	12	100
15	0	0	0	0	12	12	100
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : 5.0 - 15.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900058

TEST CONC.		ELAPSED TIME					
%		00:00	00:30	01:00	02:00	24:00	48:00
100	pH	8.1					8.2
	O2 ppm	10.3					8.5
	Cond.	640					645
	Temp(C)	20.0				20.0	20.0
60	pH	8.1					8.1
	O2 ppm	9.5					8.4
	Cond.	505					510
	Temp(C)	20.0				20.0	20.0
30	pH	8.0					8.0
	O2 ppm	9.2					8.4
	Cond.	410					415
	Temp(C)	20.0				20.0	20.0
15	pH	7.9					8.0
	O2 ppm	9.1					8.4
	Cond.	360					365
	Temp(C)	20.0				20.0	20.0
5	pH	7.9					7.9
	O2 ppm	9.1					8.4
	Cond.	330					335
	Temp(C)	20.0					20.0
Control	pH	7.9					8.0
	O2 ppm	9.0					8.4
	Cond.	310					315
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900264

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900264

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.4		8.3
	O2 ppm	9.1		8.6
	Cond.	733		708
	Temp(C)	19.5	19.0	19.5
50	pH	8.4		8.4
	O2 ppm	9.0		8.9
	Cond.	516		504
	Temp(C)	19.5	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	410		398
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	357		348
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	325		316
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	302		293
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900348

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900348

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	9.2		8.8
	Cond.	755		757
	Temp(C)	20.0	20.0	19.0
50	pH	8.2		8.2
	O2 ppm	9.1		9.0
	Cond.	531		530
	Temp(C)	20.0	20.0	19.0
25	pH	8.3		8.3
	O2 ppm	9.1		9.1
	Cond.	416		419
	Temp(C)	20.0	20.0	19.0
13	pH	8.3		8.3
	O2 ppm	9.0		9.2
	Cond.	361		361
	Temp(C)	20.0	20.0	19.0
6	pH	8.3		8.3
	O2 ppm	9.0		9.1
	Cond.	327		330
	Temp(C)	20.0	20.0	19.0
Control	pH	8.4		8.3
	O2 ppm	9.0		9.3
	Cond.	299		304
	Temp(C)	20.0	20.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900441

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900441

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		7.9
	O2 ppm	9.2		8.5
	Cond.	718		719
	Temp(C)	20.5	19.5	19.5
50	pH	8.3		8.0
	O2 ppm	9.2		8.7
	Cond.	512		513
	Temp(C)	20.5	19.5	19.5
25	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	404		407
	Temp(C)	20.5	19.5	19.5
13	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	353		357
	Temp(C)	20.5	19.5	19.5
6	pH	8.3		8.2
	O2 ppm	9.1		8.8
	Cond.	326		327
	Temp(C)	20.5	19.5	19.5
Control	pH	8.3		8.1
	O2 ppm	9.1		8.8
	Cond.	296		302
	Temp(C)	20.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900552

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : 400
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1040

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900552

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.2		8.3
	Cond.	659		660
	Temp(C)	20.0	20.0	19.5
50	pH	8.3		8.1
	O2 ppm	9.2		8.5
	Cond.	482		497
	Temp(C)	20.0	20.0	19.5
25	pH	8.3		8.2
	O2 ppm	9.2		8.5
	Cond.	393		391
	Temp(C)	20.0	20.0	19.5
13	pH	8.4		8.2
	O2 ppm	9.2		8.6
	Cond.	349		347
	Temp(C)	20.0	20.0	19.5
6	pH	8.4		8.2
	O2 ppm	9.2		8.6
	Cond.	323		320
	Temp(C)	20.0	20.0	19.5
Control	pH	8.5		8.3
	O2 ppm	9.2		8.7
	Cond.	297		300
	Temp(C)	20.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900682

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : North Outfall, (400)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1355

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900682

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.2		8.0
	O2 ppm	9.2		8.5
	Cond.	586		602
	Temp(C)	19.5	20.5	21.0
50	pH	8.2		8.1
	O2 ppm	9.3		8.6
	Cond.	440		449
	Temp(C)	19.5	20.5	21.0
25	pH	8.2		8.1
	O2 ppm	9.3		8.6
	Cond.	371		376
	Temp(C)	19.5	20.5	21.0
13	pH	8.2		8.2
	O2 ppm	9.3		8.6
	Cond.	335		340
	Temp(C)	19.5	20.5	21.0
6	pH	8.1		8.1
	O2 ppm	9.4		8.6
	Cond.	308		319
	Temp(C)	19.5	20.5	21.0
Control	pH	8.2		8.2
	O2 ppm	9.4		8.7
	Cond.	291		295
	Temp(C)	19.5	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890323

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890323

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.6		8.0
	O2 ppm	8.5		8.8
	Cond.	600		608
	Temp(C)	19.0	19.0	19.5
50	pH	8.0		8.2
	O2 ppm	8.7		9.0
	Cond.	446		438
	Temp(C)	19.0	19.0	19.5
25	pH	8.2		8.2
	O2 ppm	8.8		9.3
	Cond.	373		375
	Temp(C)	19.0	19.0	19.5
13	pH	8.3		8.3
	O2 ppm	8.8		9.8
	Cond.	335		339
	Temp(C)	19.0	19.0	19.5
6	pH	8.3		8.3
	O2 ppm	8.9		9.9
	Cond.	310		318
	Temp(C)	19.0	19.0	19.5
Control	pH	8.4		8.2
	O2 ppm	8.9		10.3
	Cond.	293		301
	Temp(C)	19.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890319

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890319

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		8.0
	O2 ppm	8.7		8.6
	Cond.	593		605
	Temp(C)	19.0	19.0	19.5
50	pH	8.1		8.2
	O2 ppm	8.7		8.6
	Cond.	447		450
	Temp(C)	19.0	19.0	19.5
25	pH	8.2		8.2
	O2 ppm	8.7		8.6
	Cond.	367		376
	Temp(C)	19.0	19.0	19.5
13	pH	8.3		8.3
	O2 ppm	8.7		9.0
	Cond.	333		339
	Temp(C)	19.0	19.0	19.5
6	pH	8.3		8.2
	O2 ppm	8.8		9.0
	Cond.	316		307
	Temp(C)	19.0	19.0	19.5
Control	pH	8.4		8.2
	O2 ppm	8.9		8.9
	Cond.	293		299
	Temp(C)	19.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900027

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/18/90 at: 1730

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	2	16
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900027

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.6		7.9
	O2 ppm	8.0		8.5
	Cond.	653		644
	Temp(C)	20.5	20.0	20.0
50	pH	7.9		8.1
	O2 ppm	8.4		8.6
	Cond.	477		471
	Temp(C)	20.5	20.0	20.0
25	pH	8.1		8.2
	O2 ppm	8.6		8.7
	Cond.	385		382
	Temp(C)	20.5	20.0	20.0
13	pH	8.2		8.3
	O2 ppm	8.6		8.7
	Cond.	341		340
	Temp(C)	20.5	20.0	20.0
6	pH	8.2		8.3
	O2 ppm	8.7		8.6
	Cond.	315		315
	Temp(C)	20.5	20.0	20.0
Control	pH	8.3		8.3
	O2 ppm	8.8		8.4
	Cond.	297		293
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900028

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/18/90 at: 1730

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	2	16
25	0	0	0	0
13	0	0	0	0
6	0	0	2	16
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900028

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	8.9		8.6
	Cond.	652		643
	Temp(C)	20.5	20.0	20.0
50	pH	8.0		8.1
	O2 ppm	8.8		8.6
	Cond.	473		466
	Temp(C)	20.5	20.0	20.0
25	pH	8.1		8.2
	O2 ppm	8.7		8.6
	Cond.	384		379
	Temp(C)	20.5	20.0	20.0
13	pH	8.2		8.3
	O2 ppm	8.8		8.6
	Cond.	342		337
	Temp(C)	20.5	20.0	20.0
6	pH	8.2		8.3
	O2 ppm	8.8		8.5
	Cond.	316		314
	Temp(C)	20.5	20.0	20.0
Control	pH	8.3		8.3
	O2 ppm	8.8		8.5
	Cond.	297		293
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900086

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 940

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900086

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		8.1
	O2 ppm	8.0		8.2
	Cond.	715		709
	Temp(C)	20.0	20.0	20.0
50	pH	8.1		8.2
	O2 ppm	8.2		8.5
	Cond.	510		505
	Temp(C)	20.0	20.0	20.0
25	pH	8.3		8.3
	O2 ppm	8.3		8.6
	Cond.	405		402
	Temp(C)	20.0	20.0	20.0
13	pH	8.4		8.4
	O2 ppm	8.3		8.7
	Cond.	356		352
	Temp(C)	20.0	20.0	20.0
6	pH	8.4		8.4
	O2 ppm	8.4		8.7
	Cond.	326		321
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.7
	Cond.	300		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900085

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter, (601)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1040

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	1	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900085

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		8.1
	O2 ppm	8.3		8.3
	Cond.	703		709
	Temp(C)	20.0	20.0	20.0
50	pH	8.2		8.2
	O2 ppm	8.4		8.5
	Cond.	505		507
	Temp(C)	20.0	20.0	20.0
25	pH	8.3		8.3
	O2 ppm	8.4		8.6
	Cond.	402		402
	Temp(C)	20.0	20.0	20.0
13	pH	8.4		8.4
	O2 ppm	8.4		8.6
	Cond.	353		353
	Temp(C)	20.0	20.0	20.0
6	pH	8.4		8.4
	O2 ppm	8.4		8.6
	Cond.	323		326
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.6
	Cond.	300		301
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890268

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	2	2	16
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890268

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.7
	Cond.	303			295
	Temp(C)	20.0	20.0	19.0	20.0
6	pH	8.1			8.3
	O2 ppm	9.0			9.3
	Cond.	333			323
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.1			8.3
	O2 ppm	9.0			9.2
	Cond.	354			341
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	7.9			8.2
	O2 ppm	8.9			9.1
	Cond.	392			378
	Temp(C)	20.0	20.0	19.0	20.0
50	pH	7.6			8.1
	O2 ppm	9.1			9.0
	Cond.	472			453
	Temp(C)	20.0	20.0	19.0	20.0
100	pH	7.0			7.8
	O2 ppm	9.2			8.8
	Cond.	627			601
	Temp(C)	20.0	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890318

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1025

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	11	12	12	100
50	0	0	0	0	0
25	0	0	0	0	0
13	0	0	0	0	0
6	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 70.7 %

95% fid. limits : 50.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03890318

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
100	pH	3.9		4.0	
	O2 ppm	9.3		9.3	
	Cond.	710		677	
	Temp(C)	19.0	19.5	19.0	
50	pH	7.1			7.6
	O2 ppm	8.9			8.8
	Cond.	485			497
	Temp(C)	19.0	19.5	19.0	19.5
25	pH	7.6			7.9
	O2 ppm	8.8			9.0
	Cond.	394			389
	Temp(C)	19.0	19.5	19.0	19.5
13	pH	7.9			8.1
	O2 ppm	8.8			9.2
	Cond.	350			352
	Temp(C)	19.0	19.5	19.0	19.5
6	pH	8.2			8.2
	O2 ppm	8.7			9.3
	Cond.	320			324
	Temp(C)	19.0	19.5	19.0	19.5
Control	pH	8.4			8.2
	O2 ppm	8.9			9.4
	Cond.	293			299
	Temp(C)	19.0	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900067

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/24/90
Received : 01/24/90
Tested : 01/25/90 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	1	1	8
25	0	0	0	0
13	0	1	1	8
6	0	0	1	8
Control	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900067

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	6.0		6.8
	O2 ppm	8.9		8.2
	Cond.	709		699
	Temp(C)	20.0	20.0	20.0
50	pH	7.1		7.8
	O2 ppm	8.8		8.2
	Cond.	504		502
	Temp(C)	20.0	20.0	20.0
25	pH	7.6		8.2
	O2 ppm	8.7		8.3
	Cond.	404		403
	Temp(C)	20.0	20.0	20.0
13	pH	8.0		8.3
	O2 ppm	8.7		8.3
	Cond.	355		354
	Temp(C)	20.0	20.0	20.0
6	pH	8.3		8.4
	O2 ppm	8.7		8.4
	Cond.	325		327
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.4
	Cond.	299		299
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900091

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/93 at: 1025

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			- TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	4	5	41
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 49.7 %

95% fid. limits : 36.9 - 66.9 %

Comments : Lethal

SLOPE of Mortality Curve : 3.8
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900091

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	3.0	2.9	
	O2 ppm	8.8	8.9	
	Cond.	1185	1178	
	Temp(C)	20.0	20.0	
50	pH	6.6		6.9
	O2 ppm	8.7		8.6
	Cond.	555		549
	Temp(C)	20.0	20.0	20.0
25	pH	7.2		7.7
	O2 ppm	8.6		8.6
	Cond.	428		426
	Temp(C)	20.0	20.0	20.0
13	pH	7.7		8.1
	O2 ppm	8.5		8.7
	Cond.	365		365
	Temp(C)	20.0	20.0	20.0
6	pH	8.0		8.3
	O2 ppm	8.6		8.8
	Cond.	333		335
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.7
	Cond.	300		300
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900176

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/08/90 at: 1015

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	3	4	33
25	0	0	1	8
13	0	0	1	8
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : 56.1 %

95% fid. limits : 44.0 - 71.3 %

Comments : Lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Trimmed Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 03900176

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	2.8	2.8	
	O2 ppm	9.0	8.7	
	Cond.	1428	1398	
	Temp(C)	19.5	19.5	
50	pH	6.3		7.1
	O2 ppm	9.0		8.7
	Cond.	580		587
	Temp(C)	19.5	19.5	20.0
25	pH	7.0		7.8
	O2 ppm	9.0		8.7
	Cond.	442		446
	Temp(C)	19.5	19.5	20.0
13	pH	7.5		8.1
	O2 ppm	8.9		8.7
	Cond.	374		377
	Temp(C)	19.5	19.5	20.0
6	pH	7.9		8.3
	O2 ppm	8.9		8.8
	Cond.	337		336
	Temp(C)	19.5	19.5	20.0
Control	pH	8.5		8.4
	O2 ppm	8.9		8.9
	Cond.	300		298
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900050

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : MOE
Sampling Method : Grab
Sampled By : B. Trach
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/28/90 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : High DO

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900050

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	6.6		7.5
	O2 ppm	11.1		7.3
	Cond.	705		650
	Temp(C)	20.0		20.0
60	pH	7.0		7.5
	O2 ppm	10.1		7.4
	Cond.	545		525
	Temp(C)	20.0		20.0
30	pH	7.4		7.7
	O2 ppm	9.6		8.3
	Cond.	430		420
	Temp(C)	20.0		20.0
15	pH	7.6		7.8
	O2 ppm	9.4		8.4
	Cond.	375		370
	Temp(C)	20.0		20.0
5	pH	7.7		7.9
	O2 ppm	9.2		8.3
	Cond.	335		330
	Temp(C)	20.0		20.0
Control	pH	7.8		7.8
	O2 ppm	9.2		8.5
	Cond.	315		315
	Temp(C)	20.0		20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900268

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1235

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	2	16
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900268

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	6.6		6.8
	O2 ppm	9.2		8.5
	Cond.	809		771
	Temp(C)	19.5	19.0	19.5
50	pH	7.3		7.8
	O2 ppm	8.8		8.5
	Cond.	553		531
	Temp(C)	19.5	19.0	19.5
25	pH	7.7		8.1
	O2 ppm	8.8		8.7
	Cond.	427		410
	Temp(C)	19.5	19.0	19.5
13	pH	8.1		8.3
	O2 ppm	8.8		8.7
	Cond.	369		354
	Temp(C)	19.5	19.0	19.5
6	pH	8.2		8.3
	O2 ppm	8.8		8.6
	Cond.	336		319
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	302		292
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900344

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900344

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	6.6		7.0
	O2 ppm	9.0		9.2
	Cond.	808		811
	Temp(C)	20.5	20.0	19.5
50	pH	7.4		7.1
	O2 ppm	9.0		8.8
	Cond.	556		557
	Temp(C)	20.5	20.0	19.5
25	pH	7.7		7.7
	O2 ppm	8.9		9.0
	Cond.	432		432
	Temp(C)	20.5	20.0	19.5
13	pH	8.0		8.1
	O2 ppm	8.9		8.9
	Cond.	370		369
	Temp(C)	20.5	20.0	19.5
6	pH	8.2		8.2
	O2 ppm	8.9		9.0
	Cond.	334		333
	Temp(C)	20.5	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	9.0		9.2
	Cond.	299		301
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900442

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	2	2	16
50	0	2	2	16
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900442

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.0		7.9
	O2 ppm	9.0		8.5
	Cond.	723		716
	Temp(C)	20.5	20.0	19.5
50	pH	8.2		8.1
	O2 ppm	9.1		8.8
	Cond.	516		512
	Temp(C)	20.5	20.0	19.5
25	pH	8.2		8.1
	O2 ppm	9.1		8.8
	Cond.	407		405
	Temp(C)	20.5	20.0	19.5
13	pH	8.3		8.1
	O2 ppm	9.1		8.9
	Cond.	355		355
	Temp(C)	20.5	20.0	19.5
6	pH	8.3		8.1
	O2 ppm	9.1		8.9
	Cond.	328		325
	Temp(C)	20.5	20.0	19.5
Control	pH	8.3		8.1
	O2 ppm	9.1		8.9
	Cond.	296		297
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900551

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900551

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.2		8.3
	Cond.	664		663
	Temp(C)	20.0	20.0	19.5
50	pH	8.3		8.1
	O2 ppm	9.2		8.5
	Cond.	486		483
	Temp(C)	20.0	20.0	19.5
25	pH	8.3		8.2
	O2 ppm	9.2		8.6
	Cond.	394		392
	Temp(C)	20.0	20.0	19.5
13	pH	8.4		8.3
	O2 ppm	9.2		8.6
	Cond.	349		347
	Temp(C)	20.0	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	320		321
	Temp(C)	20.0	20.0	19.5
Control	pH	8.5		8.3
	O2 ppm	9.2		8.8
	Cond.	297		297
	Temp(C)	20.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900683

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #1 60 inch Sewer, (602)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1515

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900683

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.0		8.2
	Cond.	595		601
	Temp(C)	19.5	20.5	21.0
50	pH	8.2		8.1
	O2 ppm	9.2		8.4
	Cond.	443		450
	Temp(C)	19.5	20.5	21.0
25	pH	8.2		8.1
	O2 ppm	9.2		8.5
	Cond.	373		376
	Temp(C)	19.5	20.5	21.0
13	pH	8.1		8.2
	O2 ppm	9.2		8.6
	Cond.	336		340
	Temp(C)	19.5	20.5	21.0
6	pH	8.2		8.2
	O2 ppm	9.3		8.6
	Cond.	305		320
	Temp(C)	19.5	20.5	21.0
Control	pH	8.3		8.1
	O2 ppm	9.3		8.8
	Cond.	294		296
	Temp(C)	19.5	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890266

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	2	2	16
25	0	0	0	1	8
50	0	0	0	1	8
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890266

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.6
	Cond.	303			301
	Temp.	20.0	20.0	19.0	20.0
6	pH	8.0			8.3
	O2 ppm	8.9			9.1
	Cond.	301			303
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.0			8.3
	O2 ppm	8.9			9.0
	Cond.	307			307
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	8.0			8.3
	O2 ppm	8.9			9.0
	Cond.	310			313
	Temp(C)	20.0	20.0	19.0	20.0
50	pH	8.0			8.3
	O2 ppm	9.3			8.9
	Cond.	326			325
	Temp(C)	20.0	20.0	19.0	20.0
100	pH	8.1			8.2
	O2 ppm	9.8			8.9
	Cond.	355			343
	Temp(C)	20.0	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890321

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: #2 Rod Mill, (1100)
Laboratory	: BAR/Road
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 12/05/89
Received	: 12/05/89
Tested	: 12/06/89 at: 1200
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	7	7	58
50	0	2	3	25
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 84.6 %

95% fid. limits : 59.3 - 120.5 %

Comments :

SLOPE of Mortality Curve : 3.2
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890321

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.1
	O2 ppm	9.6		9.3
	Cond.	345		343
	Temp(C)	19.0	19.0	19.5
50	pH	8.1		8.2
	O2 ppm	9.1		9.3
	Cond.	325		321
	Temp(C)	19.0	19.0	19.5
25	pH	8.3		8.2
	O2 ppm	9.0		9.4
	Cond.	306		311
	Temp(C)	19.0	19.0	19.5
13	pH	8.3		8.2
	O2 ppm	8.9		9.5
	Cond.	300		311
	Temp(C)	19.0	19.0	19.5
6	pH	8.4		8.2
	O2 ppm	8.9		9.3
	Cond.	297		305
	Temp(C)	19.0	19.0	19.5
Control	pH	8.4		8.3
	O2 ppm	8.9		8.8
	Cond.	293		282
	Temp(C)	19.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900030

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/16/90 at: 1710

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	10	10	83
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 78.0 %

95% fid. limits : 65.1 - 93.4 %

Comments : Lethal

SLOPE of Mortality Curve : 9.0
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900030

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	10.5		8.9
	Cond.	345		343
	Temp(C)	20.5	19.0	19.0
50	pH	8.1		8.2
	O2 ppm	9.5		8.8
	Cond.	320		317
	Temp(C)	20.5	19.0	19.0
25	pH	8.2		8.3
	O2 ppm	9.0		8.7
	Cond.	308		305
	Temp(C)	20.5	19.0	19.0
13	pH	8.3		8.3
	O2 ppm	8.9		8.6
	Cond.	302		299
	Temp(C)	20.5	19.0	19.0
6	pH	8.3		8.3
	O2 ppm	8.8		8.6
	Cond.	300		296
	Temp(C)	20.5	19.0	19.0
Control	pH	8.3		8.3
	O2 ppm	8.8		8.4
	Cond.	297		289
	Temp(C)	20.5	19.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900089

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1000

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	8	8	66
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : 41.2 %

95% fid. limits : 31.5 - 53.8 %

Comments : Lethal

SLOPE of Mortality Curve : 4.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900089

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0	8.2	
	O2 ppm	8.8	8.8	
	Cond.	339	344	
	Temp(C)	20.0	20.0	
50	pH	8.3		8.3
	O2 ppm	8.8		8.7
	Cond.	319		320
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.4
	O2 ppm	8.8		8.7
	Cond.	309		309
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.7		8.5
	Cond.	306		304
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.4
	O2 ppm	8.6		8.5
	Cond.	304		309
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.8
	Cond.	300		300
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900179

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: #2 Rod Mill, (1100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P.Peidl
Date Collected	: 03/06/90
Received	: 03/06/90
Tested	: 03/08/90 at: 1010
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	2	3	25
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : 54.4 %

95% fid. limits : 42.0 - 70.6 %

Comments : Lethal

SLOPE of Mortality Curve : 5.7
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900179

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1	7.7	
	O2 ppm	9.0	8.9	
	Cond.	363	377	
	Temp(C)	19.5	19.5	
50	pH	8.2		8.3
	O2 ppm	8.9		8.8
	Cond.	330		333
	Temp(C)	19.5	19.5	20.0
25	pH	8.4		8.4
	O2 ppm	9.0		8.8
	Cond.	314		317
	Temp(C)	19.5	19.5	20.0
13	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	307		309
	Temp(C)	19.5	19.5	20.0
6	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	303		306
	Temp(C)	19.5	19.5	20.0
Control	pH	8.5		8.4
	O2 ppm	8.9		8.8
	Cond.	300		296
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900055

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Trach
Date Collected : 03/27/90
Received : 03/29/90
Tested : 03/30/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Many floaters at 60% and 100%.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900055

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.6	7.9
	O2 ppm	10.6	7.4
	Cond.	318	314
	Temp(C)	20.0	20.0
60	pH	7.7	7.9
	O2 ppm	9.8	7.5
	Cond.	319	318
	Temp(C)	20.0	20.0
30	pH	7.8	7.8
	O2 ppm	9.4	7.3
	Cond.	318	318
	Temp(C)	20.0	20.0
15	pH	7.8	7.8
	O2 ppm	9.2	7.2
	Cond.	318	318
	Temp(C)	20.0	20.0
5	pH	7.8	7.7
	O2 ppm	9.1	8.1
	Cond.	319	320
	Temp(C)	20.0	20.0
Control	pH	7.8	7.8
	O2 ppm	9.1	8.2
	Cond.	316	317
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900269

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1245

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	4	5	41
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900269

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.3
	O2 ppm	9.8		9.1
	Cond.	352		342
	Temp(C)	19.5	19.0	19.5
50	pH	8.3		8.4
	O2 ppm	9.2		9.0
	Cond.	328		317
	Temp(C)	19.5	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	318		305
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	311		299
	Temp(C)	19.5	19.0	19.5
6	pH	8.3		8.4
	O2 ppm	8.8		8.9
	Cond.	310		297
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.5
	O2 ppm	8.9		8.9
	Cond.	302		293
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900343

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1040

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900343

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.1		8.9
	Cond.	368		366
	Temp(C)	20.5	20.0	19.5
50	pH	8.2		8.2
	O2 ppm	9.1		8.8
	Cond.	336		334
	Temp(C)	20.5	20.0	19.5
25	pH	8.2		8.3
	O2 ppm	9.0		8.8
	Cond.	318		316
	Temp(C)	20.5	20.0	19.5
13	pH	8.4		8.3
	O2 ppm	9.0		8.9
	Cond.	311		307
	Temp(C)	20.5	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.0		8.8
	Cond.	306		304
	Temp(C)	20.5	20.0	19.5
Control	pH	8.4		8.4
	O2 ppm	9.0		8.8
	Cond.	299		302
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900443

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	2	5	41
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900443

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		7.9
	O2 ppm	9.2		8.9
	Cond.	347		352
	Temp(C)	20.5	20.0	19.5
50	pH	8.2		8.0
	O2 ppm	9.2		8.9
	Cond.	322		326
	Temp(C)	20.5	20.0	19.5
25	pH	8.2		8.1
	O2 ppm	9.1		8.9
	Cond.	313		313
	Temp(C)	20.5	20.0	19.5
13	pH	8.3		8.1
	O2 ppm	9.1		8.9
	Cond.	304		307
	Temp(C)	20.5	20.0	19.5
6	pH	8.3		8.1
	O2 ppm	9.1		8.9
	Cond.	302		304
	Temp(C)	20.5	20.0	19.5
Control	pH	8.3		8.1
	O2 ppm	9.1		9.0
	Cond.	296		297
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900550

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 Rod Mill, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1020

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900550

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	9.2		8.6
	Cond.	353		354
	Temp(C)	20.0	20.0	19.5
50	pH	8.3		8.2
	O2 ppm	9.2		8.7
	Cond.	328		327
	Temp(C)	20.0	20.0	19.5
25	pH	8.4		8.2
	O2 ppm	9.2		8.7
	Cond.	313		313
	Temp(C)	20.0	20.0	19.5
13	pH	8.4		8.2
	O2 ppm	9.2		8.7
	Cond.	308		307
	Temp(C)	20.0	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	300		304
	Temp(C)	20.0	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	9.2		8.7
	Cond.	297		299
	Temp(C)	20.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890267

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	2	16
100	0	0	0	2	16

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890267

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.7
	Cond.	303			295
	Temp(C)	20.0	20.0	19.0	20.0
6	pH	8.1			8.4
	O2 ppm	8.9			9.7
	Cond.	316			316
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.1			8.3
	O2 ppm	8.9			9.9
	Cond.	336			343
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	8.0			8.3
	O2 ppm	9.0			9.8
	Cond.	369			376
	Temp(C)	20.0	20.0	19.0	20.0
50	pH	7.9			8.2
	O2 ppm	9.0			9.5
	Cond.	444			451
	Temp(C)	20.0	20.0	19.0	20.0
100	pH	7.8			8.1
	O2 ppm	9.1			9.1
	Cond.	592			595
	Temp(C)	20.0	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890322

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1210

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	9	75
50	0	0	7	58
25	0	0	8	66
13	0	0	6	50
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 11.9 %

95% fid. limits : 6.3 - 22.4 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Trimmed Spearman-Karber

TOXICITY TEST PARAMETERS

Sample Number: 03890322

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		8.0
	O2 ppm	9.5		8.4
	Cond.	565		571
	Temp(C)	19.0	19.0	19.5
50	pH	7.9		8.2
	O2 ppm	9.1		8.9
	Cond.	457		439
	Temp(C)	19.0	19.0	19.5
25	pH	8.2		8.2
	O2 ppm	8.9		9.0
	Cond.	369		364
	Temp(C)	19.0	19.0	19.5
13	pH	8.3		8.3
	O2 ppm	8.9		9.3
	Cond.	335		336
	Temp(C)	19.0	19.0	19.5
6	pH	8.3		8.2
	O2 ppm	8.9		9.2
	Cond.	315		322
	Temp(C)	19.0	19.0	19.5
Control	pH	8.4		8.3
	O2 ppm	8.9		8.3
	Cond.	293		289
	Temp(C)	19.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900029

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/18/90 at: 1730

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	5	41
50	0	0	4	33
25	0	0	1	8
13	0	0	0	0
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900029

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.9		8.0
	O2 ppm	10.6		8.9
	Cond.	578		563
	Temp(C)	20.5	20.0	20.0
50	pH	8.1		8.2
	O2 ppm	9.4		8.8
	Cond.	438		436
	Temp(C)	20.5	20.0	20.0
25	pH	8.2		8.3
	O2 ppm	9.0		8.8
	Cond.	369		365
	Temp(C)	20.5	20.0	20.0
13	pH	8.2		8.3
	O2 ppm	8.9		8.9
	Cond.	333		329
	Temp(C)	20.5	20.0	20.0
6	pH	8.3		8.3
	O2 ppm	8.8		9.0
	Cond.	310		311
	Temp(C)	20.5	20.0	20.0
Control	pH	8.3		8.3
	O2 ppm	8.8		8.4
	Cond.	297		292
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900090

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1010

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900090

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.8		8.1
	O2 ppm	8.8		8.8
	Cond.	645		648
	Temp(C)	20.0	20.0	20.0
50	pH	8.2		8.2
	O2 ppm	8.8		8.9
	Cond.	474		473
	Temp(C)	20.0	20.0	20.0
25	pH	8.4		8.4
	O2 ppm	8.7		8.9
	Cond.	388		387
	Temp(C)	20.0	20.0	20.0
13	pH	8.4		8.4
	O2 ppm	8.6		8.8
	Cond.	347		344
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.4
	O2 ppm	8.6		8.8
	Cond.	321		317
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.7
	Cond.	300		300
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900180

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1050

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	6	10	83
50	0	5	5	41
25	0	4	6	50
13	0	0	4	33
6	0	0	2	16
Control	0	0	0	0

48 Hour LC50 : 32.2 %

95% fid. limits : 16.5 - 81.4 %

Comments : Lethal

SLOPE of Mortality Curve : 1.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900180

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.2		8.7
	Cond.	716		712
	Temp(C)	20.0	19.5	19.5
50	pH	8.3		8.3
	O2 ppm	9.2		8.6
	Cond.	508		506
	Temp(C)	20.0	19.5	19.5
25	pH	8.4		8.4
	O2 ppm	9.2		8.7
	Cond.	406		405
	Temp(C)	20.0	19.5	19.5
13	pH	8.4		8.4
	O2 ppm	9.1		8.7
	Cond.	357		358
	Temp(C)	20.0	19.5	19.5
6	pH	8.4		8.4
	O2 ppm	9.0		8.7
	Cond.	327		324
	Temp(C)	20.0	19.5	19.5
Control	pH	8.6		8.4
	O2 ppm	8.9		8.7
	Cond.	298		308
	Temp(C)	20.0	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900270

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : 20 inch Mill, (1200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1240

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	4	6	50
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900270

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.3
	O2 ppm	9.5		9.0
	Cond.	720		699
	Temp(C)	20.0	19.0	19.5
50	pH	8.3		8.4
	O2 ppm	9.1		8.9
	Cond.	518		498
	Temp(C)	20.0	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	411		392
	Temp(C)	20.0	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	360		345
	Temp(C)	20.0	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		8.8
	Cond.	328		315
	Temp(C)	20.0	19.0	19.5
Control	pH	8.4		8.5
	O2 ppm	8.9		8.9
	Cond.	302		294
	Temp(C)	20.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900049

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 60 inch Sewer, (1300)

Laboratory : MOE
Sampling Method : Grab
Sampled By : B. Trach.
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/28/90 at: 1145

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	2	16
60	0	0	0	0	0	1	8
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900049

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	8.1	8.0
	O2 ppm	9.9	8.2
	Cond.	624	584
	Temp(C)	20.0	20.0
60	pH	8.0	7.9
	O2 ppm	9.8	8.2
	Cond.	498	476
	Temp(C)	20.0	20.0
30	pH	8.0	7.9
	O2 ppm	9.4	8.3
	Cond.	405	398
	Temp(C)	20.0	20.0
15	pH	7.9	7.9
	O2 ppm	9.2	8.4
	Cond.	360	358
	Temp(C)	20.0	20.0
5	pH	7.9	7.9
	O2 ppm	9.1	8.4
	Cond.	333	330
	Temp(C)	20.0	20.0
Control	pH	7.8	7.9
	O2 ppm	9.2	8.4
	Cond.	315	312
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900267

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 60 inch Sewer, (1300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1155

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900267

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.5		8.3
	O2 ppm	9.2		8.7
	Cond.	682		656
	Temp(C)	19.5	19.0	19.5
50	pH	8.4		8.3
	O2 ppm	8.9		8.9
	Cond.	497		474
	Temp(C)	19.5	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.9		9.0
	Cond.	402		383
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.8		9.0
	Cond.	355		339
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		9.0
	Cond.	329		313
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.5
	O2 ppm	8.9		9.0
	Cond.	302		294
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900557

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: #2 60 inch Sewer, (1300)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 07/03/90
Received	: 07/03/90
Tested	: 07/04/90 at: 1550
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	2	16
25	0	0	0	0
13	0	0	0	0
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900557

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	8.9		8.6
	Cond.	630		631
	Temp(C)	21.0	20.5	20.0
50	pH	8.2		8.2
	O2 ppm	9.0		8.7
	Cond.	472		468
	Temp(C)	21.0	20.5	20.0
25	pH	8.3		8.3
	O2 ppm	9.0		8.8
	Cond.	387		385
	Temp(C)	21.0	20.5	20.0
13	pH	8.3		8.3
	O2 ppm	9.0		8.8
	Cond.	342		342
	Temp(C)	21.0	20.5	20.0
6	pH	8.2		8.3
	O2 ppm	9.1		8.8
	Cond.	318		323
	Temp(C)	21.0	20.5	20.0
Control	pH	8.5		8.3
	O2 ppm	9.2		8.9
	Cond.	297		304
	Temp(C)	21.0	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900684

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : #2 60 inch Sewer, (1300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1530

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900684

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.9		8.2
	O2 ppm	8.8		8.4
	Cond.	561		570
	Temp(C)	20.5	20.5	21.0
50	pH	8.6		8.2
	O2 ppm	8.9		8.5
	Cond.	424		432
	Temp(C)	20.5	20.5	21.0
25	pH	8.5		8.2
	O2 ppm	9.0		8.5
	Cond.	360		364
	Temp(C)	20.5	20.5	21.0
13	pH	8.4		8.2
	O2 ppm	9.0		8.5
	Cond.	330		334
	Temp(C)	20.5	20.5	21.0
6	pH	8.4		8.2
	O2 ppm	9.0		8.6
	Cond.	313		315
	Temp(C)	20.5	20.5	21.0
Control	pH	8.3		8.2
	O2 ppm	9.1		8.8
	Cond.	294		296
	Temp(C)	20.5	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890264

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890264

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.6
	Cond.	303			301
	Temp(C)	20.0	20.0	19.0	20.0
6	pH	8.2			8.4
	O2 ppm	9.0			9.2
	Cond.	314			318
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.1			8.3
	O2 ppm	9.0			9.2
	Cond.	342			336
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	8.1			8.3
	O2 ppm	9.2			9.0
	Cond.	371			375
	Temp(C)	20.0	20.0	19.0	20.0
50	pH	7.9			8.3
	O2 ppm	9.1			8.9
	Cond.	445			447
	Temp(C)	20.0	20.0	19.0	20.0
100	pH	7.8			8.2
	O2 ppm	9.1			8.8
	Cond.	595			588
	Temp(C)	20.0	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900177

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/10/90 at: 1320

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900177

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		8.0
	O2 ppm	8.8		8.6
	Cond.	743		743
	Temp(C)	19.5	20.0	20.0
50	pH	8.0		8.2
	O2 ppm	8.8		8.7
	Cond.	523		523
	Temp(C)	19.5	20.0	20.0
25	pH	8.2		8.2
	O2 ppm	8.8		8.7
	Cond.	412		415
	Temp(C)	19.5	20.0	20.0
13	pH	8.3		8.3
	O2 ppm	8.8		8.7
	Cond.	357		363
	Temp(C)	19.5	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.8		8.7
	Cond.	324		328
	Temp(C)	19.5	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.9		8.6
	Cond.	302		308
	Temp(C)	19.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900053

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(1950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/29/90 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	1	1	8
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900053

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.2	7.9
	O2 ppm	8.2	8.3
	Cond.	680	669
	Temp(C)	20.0	20.0
60	pH	7.4	7.9
	O2 ppm	8.9	8.4
	Cond.	538	533
	Temp(C)	20.0	20.0
30	pH	7.6	7.9
	O2 ppm	9.0	8.4
	Cond.	428	426
	Temp(C)	20.0	20.0
15	pH	7.7	7.9
	O2 ppm	9.0	8.4
	Cond.	372	371
	Temp(C)	20.0	20.0
5	pH	7.8	7.9
	O2 ppm	9.0	8.4
	Cond.	333	334
	Temp(C)	20.0	20.0
Control	pH	7.8	7.9
	O2 ppm	9.0	8.4
	Cond.	314	313
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900265

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1220

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900265

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.9		8.2
	O2 ppm	8.3		8.7
	Cond.	783		753
	Temp(C)	19.5	19.0	19.5
50	pH	8.2		8.3
	O2 ppm	8.6		8.9
	Cond.	544		525
	Temp(C)	19.5	19.0	19.5
25	pH	8.3		8.4
	O2 ppm	8.7		8.8
	Cond.	427		408
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.8		8.8
	Cond.	368		352
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	334		317
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.5
	O2 ppm	8.9		8.9
	Cond.	302		294
	Temp(C)	19.5	19.0	19.5

NISA Daphnia

TOXICITY TEST REPORT Sample: 03900345

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter Stage 1, (1900)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: D. Johnston
Date Collected	: 05/01/90
Received	: 05/01/90
Tested	: 05/02/90 at: 1105
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900345

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		8.0
	O2 ppm	8.8		8.8
	Cond.	791		794
	Temp(C)	20.5	20.0	19.5
50	pH	8.1		8.2
	O2 ppm	9.0		9.0
	Cond.	547		551
	Temp(C)	20.5	20.0	19.5
25	pH	8.2		8.3
	O2 ppm	8.9		9.1
	Cond.	428		425
	Temp(C)	20.5	20.0	19.5
13	pH	8.2		8.3
	O2 ppm	8.9		9.2
	Cond.	367		366
	Temp(C)	20.5	20.0	19.5
6	pH	8.2		8.3
	O2 ppm	9.0		9.2
	Cond.	331		334
	Temp(C)	20.5	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	9.0		9.3
	Cond.	299		301
	Temp(C)	20.5	20.0	19.5

NISA Daphnia

TOXICITY TEST REPORT Sample: 03900444

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1320

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900444

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.6		7.8
	O2 ppm	8.3		8.4
	Cond.	751		758
	Temp(C)	20.5	20.0	19.5
50	pH	7.9		8.0
	O2 ppm	8.9		8.7
	Cond.	524		532
	Temp(C)	20.5	20.0	19.5
25	pH	8.1		8.1
	O2 ppm	9.0		8.8
	Cond.	414		418
	Temp(C)	20.5	20.0	19.5
13	pH	8.2		8.2
	O2 ppm	9.1		8.9
	Cond.	359		362
	Temp(C)	20.5	20.0	19.5
6	pH	8.2		8.2
	O2 ppm	9.1		9.0
	Cond.	328		327
	Temp(C)	20.5	20.0	19.5
Control	pH	8.3		8.2
	O2 ppm	9.1		8.9
	Cond.	296		298
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900554

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1330

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900554

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.5		7.8
	O2 ppm	8.2		8.0
	Cond.	704		704
	Temp(C)	20.5	20.0	20.0
50	pH	7.9		8.0
	O2 ppm	8.7		8.2
	Cond.	511		508
	Temp(C)	20.5	20.0	20.0
25	pH	8.2		8.1
	O2 ppm	8.9		8.3
	Cond.	408		405
	Temp(C)	20.5	20.0	20.0
13	pH	8.2		8.2
	O2 ppm	9.0		8.4
	Cond.	353		354
	Temp(C)	20.5	20.0	20.0
6	pH	8.2		8.2
	O2 ppm	9.1		8.5
	Cond.	324		325
	Temp(C)	20.5	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	9.2		8.6
	Cond.	297		296
	Temp(C)	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900685

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 1, (1900)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Hibberd
Date Collected : 08/14/90
Received : 08/14/90
Tested : 08/15/90 at: 1625

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900685

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		7.9
	O2 ppm	8.3		8.3
	Cond.	601		601
	Temp(C)	20.5	20.5	21.0
50	pH	8.2		8.1
	O2 ppm	8.8		8.4
	Cond.	445		448
	Temp(C)	20.5	20.5	21.0
25	pH	8.3		8.2
	O2 ppm	8.9		8.5
	Cond.	364		369
	Temp(C)	20.5	20.5	21.0
13	pH	8.4		8.2
	O2 ppm	8.9		8.6
	Cond.	330		333
	Temp(C)	20.5	20.5	21.0
6	pH	8.4		8.2
	O2 ppm	8.9		8.6
	Cond.	311		313
	Temp(C)	20.5	20.5	21.0
Control	pH	8.3		8.3
	O2 ppm	9.3		8.8
	Cond.	294		294
	Temp(C)	20.5	20.5	21.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890265

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890265

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.3
	Cond.	303			302
	Temp(C)	20.0	20.0	19.0	20.0
6	pH	8.0			8.4
	O2 ppm	9.1			9.5
	Cond.	317			321
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.0			8.4
	O2 ppm	8.9			9.7
	Cond.	339			342
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	8.0			8.3
	O2 ppm	9.0			9.5
	Cond.	374			378
	Temp(C)	20.0	20.0	19.0	20.0
50	pH	7.9			8.3
	O2 ppm	9.1			9.3
	Cond.	452			450
	Temp(C)	20.0	20.0	19.0	20.0
100	pH	7.7			8.2
	O2 ppm	9.0			9.1
	Cond.	600			590
	Temp(C)	20.0	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900178

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P.Peidl
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/10/90 at: 1355

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	4	6	50
25	0	5	5	41
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Lethal; No concentration:effect relationship

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900178

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		8.0
	O2 ppm	8.8		8.5
	Cond.	746		745
	Temp(C)	19.5	20.0	20.0
50	pH	8.0		8.2
	O2 ppm	8.8		8.6
	Cond.	522		527
	Temp(C)	19.5	20.0	20.0
25	pH	8.3		8.3
	O2 ppm	8.8		8.7
	Cond.	413		417
	Temp(C)	19.5	20.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.8		8.7
	Cond.	358		362
	Temp(C)	19.5	20.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.8		8.7
	Cond.	324		334
	Temp(C)	19.5	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.9		8.6
	Cond.	302		306
	Temp(C)	19.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900052

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : MOE
Sampling Method : Grab
Sampled By : Mark Smithson
Date Collected : 03/26/90
Received : 03/28/90
Tested : 03/29/90 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal :
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900052

TEST CONC. %		ELAPSED TIME 00:00	48:00
100	pH	7.3	7.9
	O2 ppm	7.8	8.1
	Cond.	685	670
	Temp(C)	20.0	20.0
60	pH	7.5	7.9
	O2 ppm	8.8	8.3
	Cond.	537	531
	Temp(C)	20.0	20.0
30	pH	7.7	7.9
	O2 ppm	8.9	8.3
	Cond.	425	420
	Temp(C)	20.0	20.0
15	pH	7.7	7.8
	O2 ppm	9.0	8.4
	Cond.	369	370
	Temp(C)	20.0	20.0
5	pH	7.8	7.8
	O2 ppm	9.0	8.4
	Cond.	332	338
	Temp(C)	20.0	20.0
Control	pH	7.7	7.8
	O2 ppm	9.1	8.3
	Cond.	313	313
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900266

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1135

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900266

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.8		8.2
	O2 ppm	8.8		8.7
	Cond.	780		755
	Temp(C)	19.5	19.0	19.5
50	pH	8.1		8.3
	O2 ppm	8.8		9.0
	Cond.	544		524
	Temp(C)	19.5	19.0	19.5
25	pH	8.3		8.4
	O2 ppm	8.7		9.0
	Cond.	423		411
	Temp(C)	19.5	19.0	19.5
13	pH	8.3		8.4
	O2 ppm	8.7		9.0
	Cond.	366		353
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.8		8.9
	Cond.	328		320
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.5
	O2 ppm	8.9		9.0
	Cond.	302		294
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900346

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Johnston
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1140

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900346

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.7		8.0
	O2 ppm	8.4		9.0
	Cond.	800		794
	Temp(C)	20.5	20.0	19.0
50	pH	8.0		8.1
	O2 ppm	8.8		9.0
	Cond.	553		550
	Temp(C)	20.5	20.0	19.0
25	pH	8.2		8.2
	O2 ppm	8.9		9.1
	Cond.	429		422
	Temp(C)	20.5	20.0	19.0
13	pH	8.2		8.2
	O2 ppm	9.0		9.2
	Cond.	366		367
	Temp(C)	20.5	20.0	19.0
6	pH	8.3		8.3
	O2 ppm	9.0		9.2
	Cond.	333		331
	Temp(C)	20.5	20.0	19.0
Control	pH	8.4		8.3
	O2 ppm	9.0		9.2
	Cond.	299		304
	Temp(C)	20.5	20.0	19.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900445

TEST CONDITIONS

Company : Stelco Steel Hilton Works
Hamilton, ONT
(950006)
Region : West Central
Industry : Iron and Steel

Control point : East Side Filter Stage 2, (2000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1325

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900445

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	7.6		7.9
	O2 ppm	7.9		8.2
	Cond.	749		764
	Temp(C)	20.5	20.0	19.5
50	pH	7.9		8.0
	O2 ppm	8.7		8.5
	Cond.	522		533
	Temp(C)	20.5	20.0	19.5
25	pH	8.1		8.1
	O2 ppm	9.0		8.7
	Cond.	410		421
	Temp(C)	20.5	20.0	19.5
13	pH	8.2		8.2
	O2 ppm	9.0		8.7
	Cond.	353		364
	Temp(C)	20.5	20.0	19.5
6	pH	8.3		8.2
	O2 ppm	9.0		8.8
	Cond.	324		329
	Temp(C)	20.5	20.0	19.5
Control	pH	8.3		8.3
	O2 ppm	9.1		8.9
	Cond.	296		304
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900555

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter Stage 2, (2000)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: P. Peidl
Date Collected	: 07/03/90
Received	: 07/03/90
Tested	: 07/04/90 at: 1440
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. ONE, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900555

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.5		7.8
	O2 ppm	8.4		8.0
	Cond.	708		710
	Temp(C)	21.0	20.0	20.0
50	pH	7.8		8.0
	O2 ppm	8.8		8.1
	Cond.	513		511
	Temp(C)	21.0	20.0	20.0
25	pH	8.1		8.1
	O2 ppm	8.9		8.1
	Cond.	409		409
	Temp(C)	21.0	20.0	20.0
13	pH	8.2		8.2
	O2 ppm	8.9		8.1
	Cond.	353		356
	Temp(C)	21.0	20.0	20.0
6	pH	8.3		8.2
	O2 ppm	8.9		8.1
	Cond.	324		326
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.2
	O2 ppm	9.2		8.2
	Cond.	297		301
	Temp(C)	21.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900686

TEST CONDITIONS

Company	: Stelco Steel Hilton Works Hamilton, ONT (950006)
Region	: West Central
Industry	: Iron and Steel
Control point	: East Side Filter Stage 2, (2000)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: T. Hibberd
Date Collected	: 08/14/90
Received	: 08/14/90
Tested	: 08/16/90 at: 1030
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. ONE, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900686

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	7.7		8.0
	O2 ppm	8.2		8.4
	Cond.	608		609
	Temp(C)	20.0	20.0	20.0
50	pH	8.0		8.2
	O2 ppm	8.6		8.6
	Cond.	460		454
	Temp(C)	20.0	20.0	20.0
25	pH	8.2		8.3
	O2 ppm	8.7		8.7
	Cond.	385		381
	Temp(C)	20.0	20.0	20.0
13	pH	8.3		8.3
	O2 ppm	8.8		8.8
	Cond.	349		350
	Temp(C)	20.0	20.0	20.0
6	pH	8.3		8.4
	O2 ppm	8.7		8.9
	Cond.	327		329
	Temp(C)	20.0	20.0	20.0
Control	pH	8.3		8.3
	O2 ppm	8.8		8.9
	Cond.	309		311
	Temp(C)	20.0	20.0	20.0

COMPANY: Stelco Steel Lake Erie Works, Nanticoke (950105)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY
The data for 13 acute lethality trout bioassays conducted on samples collected from the # 4 Pond discharge between November 1989 and November 1990 were submitted by Stelco Steel Lake Erie Works. Twelve of the samples were determined to have been not acutely lethal to trout, while the remaining two samples produced a 96 h LC50 > 100 %. A Ministry audit sample collected in April 1990 was determined nonlethal to test fish.

#4 Pond Discharge

03890273 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890324 sampled: 12/05/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900034 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900092 sampled: 02/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900174 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; Non lethal

03900261 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non lethal

01900069 sampled: 04/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit; Non-lethal

03900342 sampled: 05/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal; single concentration test

03900447 sampled: 06/05/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; 5% mort. @ 100%

03900549 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

03900650 sampled: 08/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

03900769 sampled: 09/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900899 sampled: 10/11/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non Lethal; single concentration test

Lagoon E

Blowdown Treatment Plant

Storm Water Pond #2

Coal Storage Area

Rain Gauge

Intake Water

MISA Trout

TOXICITY TEST REPORT Sample: 03890273

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/16/89 at: 1000

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890273

TEST CONC. %		ELAPSED TIME 00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.5
	O2 ppm	9.0					9.3
	Cond.	558					557
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
10	pH	7.9					8.5
	O2 ppm	9.0					9.3
	Cond.	607					608
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
20	pH	7.9					8.5
	O2 ppm	9.0					9.2
	Cond.	655					657
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
40	pH	7.9					8.4
	O2 ppm	9.0					9.2
	Cond.	754					755
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
65	pH	7.9					8.4
	O2 ppm	9.2					9.5
	Cond.	882					883
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0
100	pH	8.1					8.1
	O2 ppm	9.3					9.2
	Cond.	1054					1060
	Temp(C)	15.5	14.5	15.0	14.0	14.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03890324

TEST CONDITIONS

Company	: Stelco Steel Lake Erie Works Nanticoke, ONT (950105)
Region	: West Central
Industry	: Iron and Steel
Control point	: #4 Pond Discharge, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Milne
Date Collected	: 12/05/89
Received	: 12/05/89
Tested	: 12/06/89 at: 1300
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50	: Non-lethal
95% fid. limits	: 0.0 - 0.0 %
Comments	: Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890324

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.5				7.8
	O2 ppm	9.7				9.0
	Cond.	1185				1203
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.1				8.2
	O2 ppm	9.3				9.5
	Cond.	966				978
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.3
	O2 ppm	8.8				9.4
	Cond.	805				813
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.8				8.2
	O2 ppm	9.1				9.2
	Cond.	688				691
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.8				8.2
	O2 ppm	8.9				9.2
	Cond.	630				627
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.8				8.4
	O2 ppm	8.9				9.4
	Cond.	565				561
	Temp(C)	15.0	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900034

TEST CONDITIONS

Company	: Stelco Steel Lake Erie Works Nanticoke, ONT (950105)
Region	: West Central
Industry	: Iron and Steel
Control point	: #4 Pond Discharge, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: H. Stewart
Date Collected	: 01/16/90
Received	: 01/16/90
Tested	: 01/17/90 at: 1800
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900034

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				7.8
	O2 ppm	9.9				8.4
	Cond.	1286				1294
	Temp(C)	15.0	15.0	14.0	14.0	14.5
65	pH	8.2				8.0
	O2 ppm	9.7				8.5
	Cond.	1029				1039
	Temp(C)	15.0	15.0	14.0	14.0	14.5
40	pH	8.1				8.2
	O2 ppm	9.6				8.9
	Cond.	860				858
	Temp(C)	15.0	15.0	14.0	14.0	14.5
20	pH	8.0				8.3
	O2 ppm	9.3				9.0
	Cond.	702				704
	Temp(C)	15.0	15.0	14.0	14.0	14.5
10	pH	8.0				8.2
	O2 ppm	9.1				8.7
	Cond.	628				632
	Temp(C)	15.0	15.0	14.0	14.0	14.5
5	pH	8.0				8.2
	O2 ppm	9.1				8.5
	Cond.	593				597
	Temp(C)	15.0	15.0	14.0	14.0	14.5
Control	pH	7.9				8.3
	O2 ppm	8.7				8.7
	Cond.	555				556
	Temp(C)	15.0	15.0	14.0	14.0	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900092

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 02/06/90
Received : 02/06/90
Tested : 02/07/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900092

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.2				8.0
	O2 ppm	9.9				9.2
	Cond.	1269				1263
	Temp(C)	15.0	15.0	15.0	15.0	14.0
100	pH	8.2				8.1
	O2 ppm	9.9				9.5
	Cond.	1269				1268
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.3				9.4
	Cond.	536				529
	Temp(C)	15.0	15.0	15.0	15.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.3				9.6
	Cond.	536				532
	Temp(C)	15.0	15.0	15.0	15.0	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900174

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1345

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900174

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.7				7.9
	O2 ppm	10.7				9.1
	Cond.	1214				1203
	Temp(C)	15.5	14.0	14.0	14.5	15.0
100	pH	8.7				8.0
	O2 ppm	10.7				9.2
	Cond.	1214				1195
	Temp(C)	15.5	14.0	14.0	14.5	15.0
Control	pH	7.8				8.3
	O2 ppm	9.0				8.8
	Cond.	544				544
	Temp(C)	15.5	14.0	14.0	14.5	15.0
Control	pH	7.8				8.4
	O2 ppm	9.0				9.1
	Cond.	544				533
	Temp(C)	15.5	14.0	14.0	14.5	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900261

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1155

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	1	1	1	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900261

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.5				8.1
	O2 ppm	10.0				9.8
	Cond.	1173				1186
	Temp(C)	15.0	14.5	14.0	14.5	14.0
100	pH	8.5				7.9
	O2 ppm	10.0				9.3
	Cond.	1173				1191
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.2				9.7
	Cond.	540				539
	Temp(C)	15.0	14.5	14.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	9.2				9.7
	Cond.	540				534
	Temp(C)	15.0	14.5	14.0	14.5	14.0

MISA Trout

TOXICITY TEST REPORT Sample: 01900069

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smith
Date Collected : 04/17/90
Received : 04/18/90
Tested : 04/20/90 at: 1100

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	27:00	51:00	69:30	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900069

TEST CONC. %		ELAPSED TIME 00:00	00:30	01:00	02:00	27:00	51:00	69:30	96:00
100	pH	8.2	8.2			7.5	8.0	7.9	7.9
	O2 ppm	9.8	9.8			8.3	9.6	9.5	9.7
	Cond.	2600	840			840	840	800	840
	Temp(C)	15.0	15.0			15.0	15.0	15.0	15.0
65	pH		8.1			7.7	7.8	7.7	7.7
	O2 ppm		9.8			9.5	9.4	9.2	9.6
	Cond.		630			640	640	620	640
	Temp(C)		15.0			15.0	15.0	15.0	15.0
40	pH		8.0			8.0	8.0	7.8	7.9
	O2 ppm		9.8			9.8	9.6	9.5	9.7
	Cond.		490			490	490	485	500
	Temp(C)		15.0			15.0	15.0	15.0	15.0
30	pH		7.9			7.7	7.7	7.6	7.8
	O2 ppm		9.8			9.5	9.4	9.2	9.8
	Cond.		440			445	445	435	450
	Temp(C)		15.0			15.0	15.0	15.0	15.0
20	pH		7.8			7.8	7.8	7.5	7.8
	O2 ppm		9.8			9.8	9.6	9.4	9.8
	Cond.		395			395	395	385	395
	Temp(C)		15.0			15.0	15.0	15.0	15.0
10	pH		7.8			7.8	7.8	7.4	7.8
	O2 ppm		9.8			9.7	9.7	9.4	9.8
	Cond.		330			330	330	320	330
	Temp(C)		15.0			15.0	15.0	15.0	15.0
Control	pH		7.7			7.9	7.9	6.9	7.8
	O2 ppm		9.6			9.9	9.7	9.4	9.9
	Cond.		260			265	265	240	265
	Temp(C)		15.0			15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900342

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1440

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900342

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.6				8.1
	O2 ppm	9.8				9.7
	Cond.	1220				1236
	Temp(C)	15.5	15.0	14.5	14.5	14.5
100	pH	8.6				8.1
	O2 ppm	9.8				9.8
	Cond.	1220				1240
	Temp(C)	15.5	15.0	14.5	14.5	14.5
Control	pH	8.0				8.3
	O2 ppm	9.5				9.1
	Cond.	551				556
	Temp(C)	15.5	15.0	14.5	14.5	14.5
Control	pH	8.0				8.4
	O2 ppm	9.5				9.5
	Cond.	551				526
	Temp(C)	15.5	15.0	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900447

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : P. Peidl
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1320

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	1	1	1	10
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; 5% mort. @ 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900447

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.8				8.0
	O2 ppm	9.0				8.8
	Cond.	1244				1231
	Temp(C)	15.0	15.5	15.5	16.0	15.5
100	pH	8.8				7.9
	O2 ppm	9.0				8.5
	Cond.	1244				1240
	Temp(C)	15.0	15.5	15.5	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.5				8.7
	Cond.	552				536
	Temp(C)	15.0	15.5	15.5	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	8.5				8.6
	Cond.	552				541
	Temp(C)	15.0	15.5	15.5	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900549

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1205

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900549

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.6				7.8
	O2 ppm	9.7				8.3
	Cond.	1046				1018
	Temp(C)	15.5	15.0	15.5	16.0	15.5
100	pH	8.6				7.8
	O2 ppm	9.7				8.7
	Cond.	1046				1027
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	9.6				9.0
	Cond.	539				530
	Temp(C)	15.5	15.0	15.5	16.0	15.5
Control	pH	7.8				8.3
	O2 ppm	9.6				8.9
	Cond.	539				534
	Temp(C)	15.5	15.0	15.5	16.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900650

TEST CONDITIONS

Company	: Stelco Steel Lake Erie Works Nanticoke, ONT (950105)
Region	: West Central
Industry	: Iron and Steel
Control point	: #4 Pond Discharge, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: R. Kiehl
Date Collected	: 08/07/90
Received	: 08/07/90
Tested	: 08/08/90 at: 930
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900650

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.7				7.9
	O2 ppm	8.9				8.9
	Cond.	749				765
	Temp(C)	16.0	15.0	15.0	15.5	16.0
100	pH	8.7				7.8
	O2 ppm	8.9				8.8
	Cond.	749				766
	Temp(C)	16.0	15.0	15.0	15.5	16.0
Control	pH	7.9				8.2
	O2 ppm	8.3				8.8
	Cond.	544				551
	Temp(C)	16.0	15.0	15.0	15.5	16.0
Control	pH	7.9				8.2
	O2 ppm	8.3				8.9
	Cond.	544				548
	Temp(C)	16.0	15.0	15.0	15.5	16.0

MISA Trout

TOXICITY TEST REPORT Sample: 03900769

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 09/04/90
Received : 09/05/90
Tested : 09/06/90 at: 1035

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900769

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.2
	O2 ppm	8.8				9.1
	Cond.	761				756
	Temp(C)	15.5	16.0	15.5	15.5	15.5
65	pH	8.0				8.1
	O2 ppm	8.6				8.7
	Cond.	682				678
	Temp(C)	15.5	16.0	15.5	15.5	15.5
40	pH	8.0				8.1
	O2 ppm	8.5				8.9
	Cond.	626				619
	Temp(C)	15.5	16.0	15.5	15.5	15.5
20	pH	7.9				8.2
	O2 ppm	8.3				9.2
	Cond.	581				578
	Temp(C)	15.5	16.0	15.5	15.5	15.5
10	pH	7.9				8.1
	O2 ppm	8.3				8.7
	Cond.	560				557
	Temp(C)	15.5	16.0	15.5	15.5	15.5
5	pH	7.9				8.2
	O2 ppm	8.2				8.9
	Cond.	550				547
	Temp(C)	15.5	16.0	15.5	15.5	15.5
Control	pH	7.9				8.5
	O2 ppm	8.2				9.4
	Cond.	537				526
	Temp(C)	15.5	16.0	15.5	15.5	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900899

TEST CONDITIONS

Company	: Stelco Steel Lake Erie Works Nanticoke, ONT (950105)
Region	: West Central
Industry	: Iron and Steel
Control point	: #4 Pond Discharge, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: R. Kiehl
Date Collected	: 10/11/90
Received	: 10/11/90
Tested	: 10/12/90 at: 1005
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	72:00	96:00	TOTAL MORTALITY %
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non Lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900899

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.0				9.0
	Cond.	687				687
	Temp(C)	15.0	15.5	15.5	15.0	15.5
100	pH	8.1				8.0
	O2 ppm	10.0				8.5
	Cond.	687				683
	Temp(C)	15.0	15.5	15.5	15.0	15.5
Control	pH	8.0				8.5
	O2 ppm	9.5				9.5
	Cond.	543				534
	Temp(C)	15.0	15.5	15.5	15.0	15.5
Control	pH	8.0				8.5
	O2 ppm	9.5				9.5
	Cond.	543				534
	Temp(C)	15.0	15.5	15.5	15.0	15.5

MISA Trout

TOXICITY TEST REPORT Sample: 03900899

TEST CONDITIONS

Company	: Stelco Steel Lake Erie Works Nanticoke, ONT (950105)
Region	: West Central
Industry	: Iron and Steel
Control point	: #4 Pond Discharge, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: R. Kiehl
Date Collected	: 10/11/90
Received	: 10/11/90
Tested	: 10/12/90 at: 1005
Type of Bioassay	: STATIC (Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).
Test Animal	: Rainbow trout
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non Lethal; single concentration test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900899

TEST CONC.		ELAPSED TIME				
%		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				8.1
	O2 ppm	10.0				9.0
	Cond.	687				687
	Temp(C)	15.0	15.5	15.5	15.0	15.5
100	pH	8.1				8.0
	O2 ppm	10.0				8.5
	Cond.	687				683
	Temp(C)	15.0	15.5	15.5	15.0	15.5
Control	pH	8.0				8.5
	O2 ppm	9.5				9.5
	Cond.	543				534
	Temp(C)	15.0	15.5	15.5	15.0	15.5
Control	pH	8.0				8.5
	O2 ppm	9.5				9.5
	Cond.	543				534
	Temp(C)	15.0	15.5	15.5	15.0	15.5

COMPANY: Stelco Steel Lake Erie Works, Nanticoke (950105)
SECTOR: Iron and Steel
REGION: West Central

SUMMARY

Data for eleven Daphnia magna acute lethality toxicity tests conducted on samples of effluent from # 4 pond discharge collected between November 1989 and September 1990 were submitted by Stelco Steel Lake Erie Works of Nanticoke. Five of eleven samples were not acutely lethal to Daphnia and four samples had LC50s > 100%. The samples collected in February and June were toxic to Daphnia with 48 h LC50s of 27% and 58% respectively. A sample collected in March and tested in the Ministry laboratory was not acutely lethal to Daphnia.

#4 Pond Discharge

03890273 sampled: 11/15/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03890324 sampled: 12/05/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900034 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900092 sampled: 02/06/90 LC50: 26.9 %
95% fid. limits: 19.4 - 37.3 % slope: 3.5
comments: Lethal

03900174 sampled: 03/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

03900261 sampled: 04/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900069 sampled: 04/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900342 sampled: 05/01/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900447 sampled: 06/05/90 LC50: 58.4 %
95% fid. limits: 46.2 - 73.8 % slope: 5.7
comments: Lethal

03900549 sampled: 07/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900650 sampled: 08/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900769 sampled: 09/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900899 sampled: 10/11/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non Lethal

Lagoon E

Blowdown Treatment Plant

Storm Water Pond #2

Coal Storage Area

Rain Gauge

Intake Water

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890273

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/18/89 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	1	8
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890273

TEST CONC.		ELAPSED TIME			
%		00:00	04:00	24:00	48:00
Control	pH	7.9			8.3
	O2 ppm	8.9			9.6
	Cond.	303			301
	Temp(C)	20.0	20.0	19.0	20.0
6	pH	8.2			8.4
	O2 ppm	9.0			9.3
	Cond.	344			342
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.2			8.3
	O2 ppm	8.9			9.2
	Cond.	398			398
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	8.1			8.3
	O2 ppm	8.9			9.1
	Cond.	487			486
	Temp(C)	20.0	20.0	19.0	20.0
50	pH	8.1			8.3
	O2 ppm	9.1			9.0
	Cond.	678			670
	Temp(C)	20.0	20.0	19.0	20.0
100	pH	8.1			8.3
	O2 ppm	9.0			8.9
	Cond.	1045			1032
	Temp(C)	20.0	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03890324

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 12/05/89
Received : 12/05/89
Tested : 12/06/89 at: 1215

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	2	16
50	0	0	1	8
25	0	0	0	0
13	0	0	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890324

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.6		8.4
	O2 ppm	9.5		8.4
	Cond.	1180		1182
	Temp(C)	19.0	19.0	19.5
50	pH	8.4		8.3
	O2 ppm	9.1		8.8
	Cond.	744		752
	Temp(C)	19.0	19.0	19.5
25	pH	8.4		8.3
	O2 ppm	9.0		9.2
	Cond.	525		512
	Temp(C)	19.0	19.0	19.5
13	pH	8.3		8.3
	O2 ppm	9.0		9.2
	Cond.	418		409
	Temp(C)	19.0	19.0	19.5
6	pH	8.3		8.3
	O2 ppm	8.9		9.2
	Cond.	352		348
	Temp(C)	19.0	19.0	19.5
Control	pH	8.3		8.3
	O2 ppm	9.0		8.7
	Cond.	293		289
	Temp(C)	19.0	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900034

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : H. Stewart
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/17/90 at: 1100

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900034

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.3		8.1
	O2 ppm	9.2		8.6
	Cond.	1262		1275
	Temp(C)	20.0	19.0	20.0
50	pH	8.3		8.2
	O2 ppm	9.0		8.7
	Cond.	788		791
	Temp(C)	20.0	19.0	20.0
25	pH	8.4		8.3
	O2 ppm	8.9		8.8
	Cond.	541		544
	Temp(C)	20.0	19.0	20.0
13	pH	8.4		8.3
	O2 ppm	8.8		8.8
	Cond.	430		432
	Temp(C)	20.0	19.0	20.0
6	pH	8.4		8.3
	O2 ppm	8.8		8.7
	Cond.	357		360
	Temp(C)	20.0	19.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.8		8.6
	Cond.	296		293
	Temp(C)	20.0	19.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900092

TEST CONDITIONS

Company	: Stelco Steel Lake Erie Works Nanticoke, ONT (950105)
Region	: West Central
Industry	: Iron and Steel
Control point	: #4 Pond Discharge, (100)
Laboratory	: BAR
Sampling Method	: Grab
Sampled By	: S. Milne
Date Collected	: 02/06/90
Received	: 02/06/90
Tested	: 02/07/90 at: 930
Type of Bioassay	: STATIC (Daphnia magna Acute Lethality Toxicity Test Protocol. OME, 1988)
Test Animal	: D. magna
Weight(gm)	:
Length(mm)	:

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	11	12	100
50	0	10	12	100
25	0	4	4	33
13	0	0	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 26.9 %

95% fid. limits : 19.4 - 37.3 %

Comments : Lethal

SLOPE of Mortality Curve : 3.5
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900092

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.1
	O2 ppm	8.8		8.8
	Cond.	1240		1229
	Temp(C)	20.0	20.0	20.0
50	pH	8.4		8.3
	O2 ppm	8.6		8.8
	Cond.	779		770
	Temp(C)	20.0	20.0	20.0
25	pH	8.5		8.4
	O2 ppm	8.4		8.8
	Cond.	543		535
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.4
	O2 ppm	8.4		8.8
	Cond.	427		423
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.4
	O2 ppm	8.3		8.8
	Cond.	357		353
	Temp(C)	20.0	20.0	20.0
Control	pH	8.5		8.4
	O2 ppm	8.7		8.6
	Cond.	300		300
	Temp(C)	20.0	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900174

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 03/06/90
Received : 03/06/90
Tested : 03/07/90 at: 1425

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	1	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900174

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.8		8.3
	O2 ppm	9.2		8.4
	Cond.	1192		1186
	Temp(C)	19.5	19.5	20.0
50	pH	8.7		8.4
	O2 ppm	8.8		8.4
	Cond.	756		755
	Temp(C)	19.5	19.5	20.0
25	pH	8.6		8.4
	O2 ppm	8.7		8.4
	Cond.	536		534
	Temp(C)	19.5	19.5	20.0
13	pH	8.5		8.4
	O2 ppm	8.6		8.4
	Cond.	424		423
	Temp(C)	19.5	19.5	20.0
6	pH	8.5		8.4
	O2 ppm	8.7		8.4
	Cond.	361		361
	Temp(C)	19.5	19.5	20.0
Control	pH	8.6		8.4
	O2 ppm	8.9		8.5
	Cond.	298		303
	Temp(C)	19.5	19.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900261

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 04/03/90
Received : 04/03/90
Tested : 04/04/90 at: 1055

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900261

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.4		8.3
	O2 ppm	8.9		8.9
	Cond.	1214		1173
	Temp(C)	19.5	19.0	19.5
50	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	763		731
	Temp(C)	19.5	19.0	19.5
25	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	533		507
	Temp(C)	19.5	19.0	19.5
13	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	424		407
	Temp(C)	19.5	19.0	19.5
6	pH	8.4		8.4
	O2 ppm	8.9		8.9
	Cond.	358		343
	Temp(C)	19.5	19.0	19.5
Control	pH	8.4		8.4
	O2 ppm	8.9		8.7
	Cond.	302		295
	Temp(C)	19.5	19.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 02900069

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : MOE
Sampling Method : Grab
Sampled By : M. Smithson
Date Collected : 04/17/90
Received : 04/18/90
Tested : 04/19/90 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 02900069

TEST CONC.		ELAPSED TIME					
%		00:00	01:00	02:00	04:00	24:00	48:00
100	pH	8.2					8.1
	O2 ppm	9.4					9.3
	Cond.	985					875
	Temp(C)	20.0					20.0
60	pH	8.0					8.0
	O2 ppm	9.3					8.3
	Cond.	735					720
	Temp(C)	20.0					20.0
30	pH	7.9					8.0
	O2 ppm	9.2					8.3
	Cond.	530					515
	Temp(C)	20.0					20.0
15	pH	7.8					8.0
	O2 ppm	9.2					8.3
	Cond.	425					415
	Temp(C)	20.0					20.0
5	pH	7.8					8.0
	O2 ppm	9.2					8.4
	Cond.	355					350
	Temp(C)	20.0					20.0
Control	pH	7.7					7.9
	O2 ppm	9.2					8.4
	Cond.	320					310
	Temp(C)	20.0					20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900342

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 05/01/90
Received : 05/01/90
Tested : 05/02/90 at: 1115

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	3	25
50	0	1	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900342

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.6		8.1
	O2 ppm	9.0		8.8
	Cond.	1218		1202
	Temp(C)	20.5	20.0	19.5
50	pH	8.4		8.2
	O2 ppm	9.0		9.1
	Cond.	762		754
	Temp(C)	20.5	20.0	19.5
25	pH	8.4		8.3
	O2 ppm	9.1		9.0
	Cond.	531		528
	Temp(C)	20.5	20.0	19.5
13	pH	8.4		8.3
	O2 ppm	9.1		9.0
	Cond.	417		415
	Temp(C)	20.5	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.1		9.0
	Cond.	354		352
	Temp(C)	20.5	20.0	19.5
Control	pH	8.4		8.3
	O2 ppm	9.0		9.0
	Cond.	299		301
	Temp(C)	20.5	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900447

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 06/05/90
Received : 06/05/90
Tested : 06/06/90 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	5	12	100
50	0	1	3	25
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 58.4 %

95% fid. limits : 46.2 - 73.8 %

Comments : Lethal

SLOPE of Mortality Curve : 5.7
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900447

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.7		8.2
	O2 ppm	9.1		8.7
	Cond.	1206		1228
	Temp(C)	20.5	19.5	19.5
50	pH	8.5		8.2
	O2 ppm	9.1		8.8
	Cond.	761		770
	Temp(C)	20.5	19.5	19.5
25	pH	8.4		8.2
	O2 ppm	9.1		8.8
	Cond.	525		537
	Temp(C)	20.5	19.5	19.5
13	pH	8.4		8.2
	O2 ppm	9.1		8.8
	Cond.	415		425
	Temp(C)	20.5	19.5	19.5
6	pH	8.4		8.1
	O2 ppm	9.1		8.8
	Cond.	357		356
	Temp(C)	20.5	19.5	19.5
Control	pH	8.3		8.1
	O2 ppm	9.1		8.7
	Cond.	296		300
	Temp(C)	20.5	19.5	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900549

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 07/03/90
Received : 07/03/90
Tested : 07/04/90 at: 1010

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC. %	ELAPSED TIME 00:00	24:00	48:00	TOTAL MORTALITY %
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900549

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.6		8.2
	O2 ppm	9.2		8.4
	Cond.	995		999
	Temp(C)	20.0	20.0	19.5
50	pH	8.5		8.2
	O2 ppm	9.2		8.6
	Cond.	655		655
	Temp(C)	20.0	20.0	19.5
25	pH	8.5		8.3
	O2 ppm	9.2		8.6
	Cond.	482		480
	Temp(C)	20.0	20.0	19.5
13	pH	8.5		8.2
	O2 ppm	9.2		8.6
	Cond.	395		394
	Temp(C)	20.0	20.0	19.5
6	pH	8.4		8.3
	O2 ppm	9.2		8.6
	Cond.	339		342
	Temp(C)	20.0	20.0	19.5
Control	pH	8.5		8.2
	O2 ppm	9.2		8.6
	Cond.	297		301
	Temp(C)	20.0	20.0	19.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900650

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. Kiehl
Date Collected : 08/07/90
Received : 08/07/90
Tested : 08/08/90 at: 1030

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900650

TEST CONC. %		ELAPSED TIME 00:00	24:00	48:00
100	pH	8.6		8.2
	O2 ppm	9.0		8.6
	Cond.	739		730
	Temp(C)	20.0	21.0	20.5
50	pH	8.4		8.2
	O2 ppm	9.0		8.6
	Cond.	519		515
	Temp(C)	20.0	21.0	20.5
25	pH	8.3		8.3
	O2 ppm	9.0		8.7
	Cond.	407		405
	Temp(C)	20.0	21.0	20.5
13	pH	8.2		8.3
	O2 ppm	9.0		8.7
	Cond.	357		355
	Temp(C)	20.0	21.0	20.5
6	pH	8.2		8.4
	O2 ppm	8.9		8.7
	Cond.	323		326
	Temp(C)	20.0	21.0	20.5
Control	pH	8.2		8.3
	O2 ppm	9.0		8.8
	Cond.	301		298
	Temp(C)	20.0	21.0	20.5

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900769

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : S. Milne
Date Collected : 09/04/90
Received : 09/05/90
Tested : 09/06/90 at: 1205

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900769

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.2		8.2
	O2 ppm	9.0		8.6
	Cond.	749		733
	Temp(C)	20.5	20.5	20.0
50	pH	8.0		8.2
	O2 ppm	9.1		8.8
	Cond.	524		514
	Temp(C)	20.5	20.5	20.0
25	pH	8.0		8.2
	O2 ppm	9.1		8.9
	Cond.	416		409
	Temp(C)	20.5	20.5	20.0
13	pH	7.9		8.2
	O2 ppm	9.1		8.9
	Cond.	356		352
	Temp(C)	20.5	20.5	20.0
6	pH	7.9		8.2
	O2 ppm	9.1		9.0
	Cond.	328		322
	Temp(C)	20.5	20.5	20.0
Control	pH	7.9		8.2
	O2 ppm	9.1		9.1
	Cond.	300		296
	Temp(C)	20.5	20.5	20.0

MISA Daphnia

TOXICITY TEST REPORT Sample: 03900899

TEST CONDITIONS

Company : Stelco Steel Lake Erie Works
Nanticoke, ONT
(950105)
Region : West Central
Industry : Iron and Steel

Control point : #4 Pond Discharge, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : R. Kiehl
Date Collected : 10/11/90
Received : 10/11/90
Tested : 10/12/90 at: 1110

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900899

TEST CONC.		ELAPSED TIME		
%		00:00	24:00	48:00
100	pH	8.1		8.2
	O2 ppm	9.1		9.0
	Cond.	656		660
	Temp(C)	20.5	21.0	21.0
50	pH	8.3		8.3
	O2 ppm	9.0		9.0
	Cond.	483		486
	Temp(C)	20.5	21.0	21.0
25	pH	8.4		8.4
	O2 ppm	9.0		9.0
	Cond.	397		396
	Temp(C)	20.5	21.0	21.0
13	pH	8.4		8.4
	O2 ppm	9.0		9.0
	Cond.	358		359
	Temp(C)	20.5	21.0	21.0
6	pH	8.4		8.4
	O2 ppm	9.0		9.0
	Cond.	330		332
	Temp(C)	20.5	21.0	21.0
Control	pH	8.4		8.4
	O2 ppm	9.0		8.7
	Cond.	305		310
	Temp(C)	20.5	21.0	21.0